



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
(Case No. 00-505-B)

In re Application of:)	
)	
Progulske-Fox)	
	)	Examiner: Not Assigned
Serial No.: 09/980,845)	
	)	Group Art Unit: Not Assigned
Filed: August 4, 2000)	
	)	Conf. No. 3701
For: Microbial Polynucleotides Expressed)	
During Infection of a Host)	

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

**PETITION TO WITHDRAW HOLDING OF ABANDONMENT
UNDER 37 CFR §1.181(A)**

This paper is filed in response to the notification of abandonment mailed in the above-mentioned application on March 3, 2006. Applicants respectfully request reconsideration of the holding of abandonment.

The notification of abandonment states that the Applicant failed to respond to the notification of missing requirements mailed February 28, 2002 within the time period set therein. *See*, Appendix A. Therefore, it appears that Office has abandoned the application based on a failure to reply within a set time period. *See*, MPEP §711.03(b). However, the Applicants clearly responded in a timely manner to the notification of missing requirements mailed on February 28, 2002. A response to the notice was filed on March 27, 2002 and a stamped postcard was received from the Office indicating that the response was indeed received. *See*, Appendix B. Additionally, the response was filed under the provisions of 37 CFR §1.8 by the undersigned. The undersigned states that the response was filed properly on March 27, 2002 under the requirements of 37 CFR §1.8. The response included the required declaration, a paper copy of the

sequence listing, a computer-readable form of the sequence listing, a statement under 37 CFR §1.821, and a fee. *See*, Appendix B. Therefore, the application cannot be abandoned for failure to timely respond to the notification of missing requirements of February 28, 2002.

On June 12, 2002 a notification of defective response was issued by the Office. *See*, Appendix C. The notification stated that the computer readable form filed with the application was found to be damaged and/or unreadable as evidenced by the attached CFR Problem Diskette Report. No CFR Problem Diskette Report was attached. The notification also stated that the computer readable form did not comply with the sequence listing requirements. A Raw Sequence Listing Error Report was attached to the notification. Applicants assumed that the computer readable form of the sequence listing was not damaged or defective since a Raw Sequence Listing Error Report was generated. A response was timely filed by the applicants on June 24, 2002 under the requirements of 37 CFR §1.8. The undersigned states that the response was filed properly on June 24, 2002 under the requirements of 37 CFR §1.8. A stamped postcard was received from the Office to evidence receipt. *See*, Appendix D. It was the undersigned's good faith belief that all errors listed in the raw sequence listing error report were corrected in the response of June 24, 2002. *See*, Appendix D.

Two and one half years later, on January 3, 2005, another notification of defective response was received from the Office. *See*, Appendix E. The notification stated that (1) the content of the computer readable form submitted on June 24, 2002 did not comply with the requirement of Annex C as indicated by the attached marked up copy of the "Raw Sequence Listing"; and (2) that the computer readable form was found to be damaged and/or unreadable as indicated on the attached CRF Diskette Problem Report. However, no Raw Sequence Listing Error Report or Diskette Problem Report was attached to the notification.

On January 24, 2005 the undersigned requested the Raw Sequence Listing Error Report and/or Diskette Problem Report from Examiner Vonda Wallace via both phone and facsimile. *See*, Appendix F. No response was received from Examiner Wallace. Since no extensions of time were available to applicants, a response was filed on February 3, 2005 under the requirements of 37 CFR §1.8. The undersigned states that the response was filed properly on February 3, 2005 under the requirements of 37 CFR §1.8. A stamped postcard was received from the Office to

evidence receipt. *See*, Appendix G. The response included an explanation of the situation and a written copy and computer-readable form of the sequence listing. *See*, Appendix G.

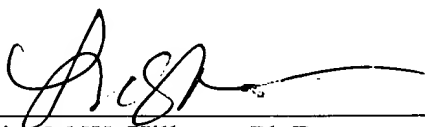
Well over a year later, on March 3, 2006, a notice of abandonment for failure to reply to the notification of missing requirements of February 28, 2002 was issued. *See*, Appendix H. Attached to the notification was a Raw Sequence Listing Error Report dated January 18, 2006. It is unclear which version of the sequence listing was used to generate this report or why a copy of the Raw Sequence Listing Error Report from the January 3, 2005 notification was never provided to the Applicants.

All replies have been filed within time periods set within the notifications. The Office **has not** alleged that the application has been abandoned based on an insufficiency of reply. *See*, MPEP §711.03(a). Applicants have made a good faith effort to timely and correctly respond to the notifications received from the office despite the fact that the notifications were incomplete and/or inconsistent (*i.e.*, missing reports or stating that the disk was damaged and/or unreadable and providing a report from a clearly readable disk) and a request for clarification went unanswered. Applicants respectfully request that the application be reinstated.

A new written copy and computer readable form of the sequence listing is attached. The new version of the sequence listing addresses the errors in the Raw Sequence Listing Report attached to the Notification of Abandonment. Applicants respectfully request that this version of the sequence listing be entered into the application in place of previously submitted versions of the sequence listing. The written and computer readable forms of the sequence listing are identical and add no new matter.

Respectfully submitted,

Dated: 3/16/06

By: 

Lisa M.W. Hillman, Ph.D.
Reg. No. 43,673



PATENT
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Progulske-Fox

Serial No. 09/980,845

International Filing Date: Aug. 4, 2000

Priority Date: Aug. 6, 1999

)
) Group Art Unit: TBA
)
) Examiner: TBA
)
) Atty. Dckt. No.: 00-505-B
)
) Intl. Appl. No.: PCT/US00/2130
)

For: MICROBIAL POLYNUCLEOTIDES EXPRESSED DURING INFECTION OF A HOST

TRANSMITTAL LETTER

Asst. Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

In regard to the above identified application,

1. We are transmitting herewith the attached:

- a) Response to Notice to File Missing Parts;
- b) Declaration and Power of Attorney;
- c) Statement Under 37 C.F.R. § 1.821
- d) Paper copy of Sequence Listing and Diskette copy;
- e) Filing Fee Check;
- f) Return postcard.

2. With respect to fees:

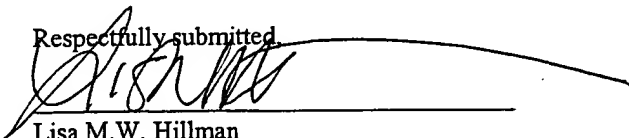
- a) A check in the amount of \$65.00 is enclosed.
- b) Please charge any underpayment or credit any overpayment our Deposit Account, No. 13-2490.

3. GENERAL AUTHORIZATION: Please charge any additional fees or credit overpayment to Deposit Account No. 13-2490. A duplicate copy of this sheet is enclosed.

4. CERTIFICATE OF MAILING UNDER 37 CFR § 1.8: The undersigned hereby certifies that this Transmittal Letter and the paper, as described in paragraph 1, are being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to the Asst. Commissioner for Patents, Washington, D.C. 20231 on March 27, 2002.

Date: March 27, 2002

Respectfully submitted


Lisa M.W. Hillman
Registration No. 43,673



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents, Box 901
United States Patent and Trademark Office
Washington, D.C. 20503
www.uspto.gov

U.S. APPLICATION NUMBER NO.	FIRST NAMED APPLICANT	ATTY. DOCKET NO.
09/980,845	Ann Progulske-Fox	00-505-B

INTERNATIONAL APPLICATION NO.

PCT/US00/21340

I.A. FILING DATE	PRIORITY DATE
08/04/2000	08/06/1999

Lisa M.W. Hillman
McDonnell Boehnen Hulbert & Berghoff
300 S Wacker Drive Suite 3200
Chicago, IL 60606

CONFIRMATION NO. 3701

371 FORMALITIES LETTER



OC000000007521267

Date Mailed: 02/28/2002

NOTIFICATION OF MISSING REQUIREMENTS UNDER 35 U.S.C. 371 IN THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US)

The following items have been submitted by the applicant or the IB to the United States Patent and Trademark Office as a Designated Office (37 CFR 1.494):

- U.S. Basic National Fees
- Indication of Small Entity Status
- Priority Document
- Biochemical Sequence Listing
- Copy of references cited in ISR
- Copy of the International Application
- Copy of the International Search Report
- Request for Immediate Examination
- Small Entity Statement

DOCKETED

MAR 08 2002

DUE DATE:

BY:

K.B.

CB

The following items **MUST** be furnished within the period set forth below in order to complete the requirements for acceptance under 35 U.S.C. 371:

- Oath or declaration of the inventors, in compliance with 37 CFR 1.497(a) and (b), identifying the application by the International application number and international filing date.

ALL OF THE ITEMS SET FORTH ABOVE MUST BE SUBMITTED WITHIN TWO (2) MONTH FROM THE DATE OF THIS NOTICE OR BY 22 or 32 MONTHS (where 37 CFR 1.495 applies) FROM THE PRIORITY DATE FOR THE APPLICATION, WHICHEVER IS LATER. FAILURE TO PROPERLY RESPOND WILL RESULT IN ABANDONMENT.

The time period set above may be extended by filing a petition and fee for extension of time under the provisions of 37 CFR 1.136(a).

The following items **MUST** be furnished within the period set forth below:

• The nucleotide and/or amino acid sequence disclosure contained in this application does not comply with the requirements for such a disclosure as set forth in 37 CFR 1.821-1.825 for the following reason(s):

- A copy of the "Sequence Listing" in computer readable form has not been submitted as required by 37 CFR 1.821(e).
- APPLICANT MUST PROVIDE:
 - An initial or substitute computer readable form (CRF) of the "Sequence Listing."
 - A statement that the contents of the paper or compact disc and the computer readable form are the same and, where applicable, include no new matter, as required by 37 CFR 1.821(e), 1.821(f), 1.821(g), 1.825(b) or 1.825(d).

• For questions regarding compliance to 37 CFR 1.821-1.825 requirements, please contact:

- For Rules Interpretation, call (703) 308-4216
- To Purchase PatentIn Software, call (703) 306-2600
- For PatentIn Software Program Help, call (703) 306-4119 or e-mail at patin21help@uspto.gov or patin3help@uspto.gov

- A copy of the "Sequence Listing" in computer readable form has not been submitted as required by 37 CFR 1.821(e).

Applicant is reminded that any communications to the United States Patent and Trademark Office must be mailed to the address given in the heading and include the U.S. application no. shown above (37 CFR 1.5)

*A copy of this notice **MUST** be returned with the response.*

VONDA M WALLACE

Telephone: (703) 305-3736

PART 1 - ATTORNEY/APPLICANT COPY

U.S. APPLICATION NUMBER NO.	INTERNATIONAL APPLICATION NO.	ATTY. DOCKET NO.
09/980,845	PCT/US00/21340	00-505-B



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of)
) Group Art Unit: TBA
Progulske-Fox)
) Examiner: TBA
Serial No. 09/980,845)
) Atty. Dckt. No.: 00-505-B
International Filing Date: Aug. 4, 2000)
) Intl. Appl. No.: PCT/US00/2130
Priority Date: Aug. 6, 1999)

For: MICROBIAL POLYNUCLEOTIDES EXPRESSED DURING INFECTION OF A HOST

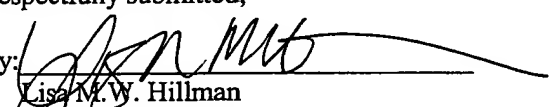
RESPONSE TO NOTICE TO FILE MISSING PARTS

Box Missing Parts
Assistant Commissioner of Patents
Washington, D.C. 20231

Dear Sir:

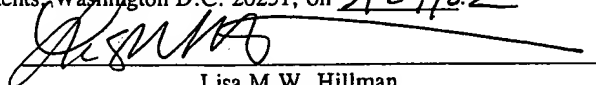
The attached executed declaration is submitted in response to the Notification of Missing Requirements Under 35 U.S.C. 371 in the United States Designated/Elected Office mailed on February 28, 2002, in the above-mentioned case. Also enclosed is a paper copy of the sequence listing, a diskette containing the sequence listing and Statement Under 37 C.F.R. §1.821. A check for sixty-five dollars (\$65) for an oath or declaration surcharge is enclosed. It is believed that no further fee is due to make this filing complete; however, if a fee or credit is due the Commissioner is authorized to charge or credit our Deposit Account No. 13-2490.

Date: 3/27/02

Respectfully submitted,
By: 
Lisa M.W. Hillman
Registration No.: 43,673

CERTIFICATE OF MAILING (37 C.F.R. 1.8a)

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to the Assistant Commissioner of Patents, Washington D.C. 20231, on 3/27/02

Date: 3/27/02 
Lisa M.W. Hillman



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
(Case No.00-505-B)

PATENT

In the Application of:)	
)	
Progulske-Fox	)	Art Group: Not assigned
)	
Serial No.: 09/980,845)	
	)	Examiner: Not assigned
Filed: August 4, 2000)	
)	
For: Microbial Polynucleotides Expressed)	
During Infection of a Host)	

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL LETTER

Sir:

1. The Compact Disc contained herein ("00-505 ST25")
submitted under 37 C.F.R. § 1.52(e):

- ☒ Is formatted for IBM-PC Machines
- ☒ Is compatible with MS-Windows Operating System
- ☒ Contains the file "00-505 ST25" which is 26,624
bytes in size and was created on 03/16/2006.

2. Statement under 37 C.F.R. § 1.821(f): The undersigned certifies that the original CD-R
submitted herein, titled "00-505 ST25" (COPY 1) and the copy CD-R entitled "00-505 ST25"
(COPY 2) are identical in content as required by C.F.R. § 1.52(e)(4).

Respectfully submitted,

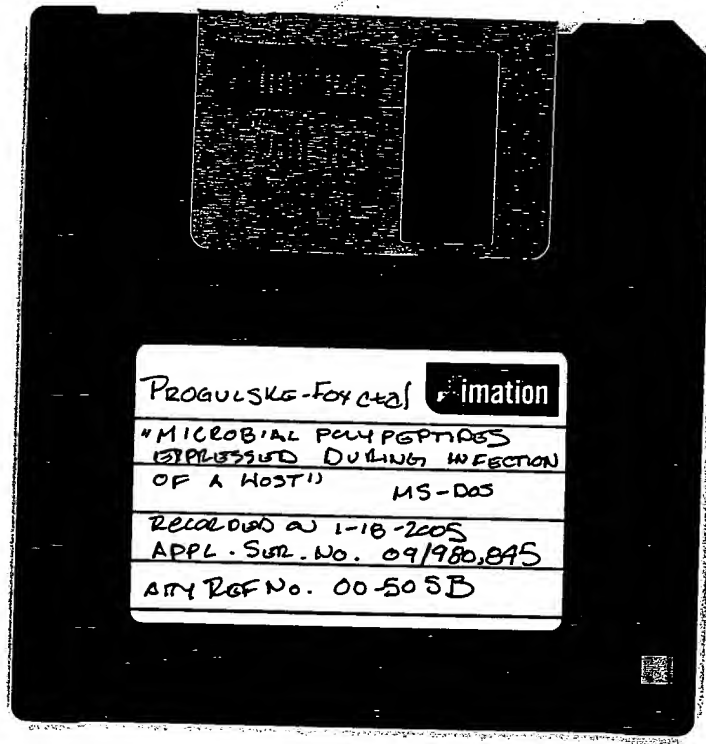
McDonnell Bochnen Hulbert & Berghoff LLP

Dated: March 16, 2006

By:

Lisa M.W. Hillman
Reg. No. 43,673

McDonnell Bochnen Hulbert & Berghoff LLP
300 South Wacker Drive
32nd Floor
Chicago, Illinois 60606
Phone: 312-913-0001
Fax: 312-913-0002



BEST AVAILABLE COPY

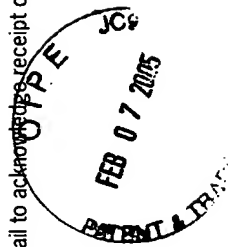
BEST AVAILABLE COPY

Hon. Commissioner of Patents and Trademarks SN 09/980,845 Atty LMWH/tmp
Re: Applicant Progulske-Fox Case No.: 00-505-B

Microbial Polynucleotides Expressed During Infection of a Host

Sir: Please place the Patent Office receipt stamp hereon and mail to acknowledge receipt of:

- ☒ Transmittal Letter (with Duplicate)
- ☒ Response to Notice of Defective Response
- ☒ Copy of Notification of Defective Response
- ☒ Paper and disk copy of correct sequence listing
- ☒ Return Receipt Postcard

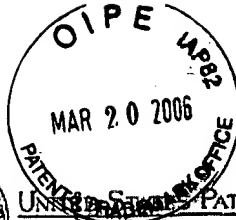


Fee Enclosed

\$0.00

February 3, 2005

Respectfully,
McDonnell Boehnen Hulbert & Berghoff
Attorney for Applicant



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1420
Alexandria, Virginia 22313-1420
www.uspto.gov

U.S. APPLICATION NUMBER NO. 09/980,845	FIRST NAMED APPLICANT Ann Progulski-Fox	ATTY. DOCKET NO. 00-505-B
---	--	------------------------------

INTERNATIONAL APPLICATION NO. PCT/US00/21340	
I.A. FILING DATE 08/04/2000	PRIORITY DATE 08/06/1999

Lisa M.W. Hillman
McDonnell Boehnen Hulbert & Berghoff
300 S Wacker Drive Suite 3200
Chicago, IL 60606

CONFIRMATION NO. 3701

371
ABANDONMENT/TERMINATION
LETTER



OC00000018184385

Date Mailed: 03/03/2006

NOTIFICATION OF ABANDONMENT

The United States Patent and Trademark Office in its capacity as a Designated / Elected Office (37 CFR 1.495) has made the following determination:

- Applicant has failed to respond to the notification of MISSING REQUIREMENTS (Form PCT/DO/EO/905), mailed 02/28/2002 within the time period set therein.

Therefore, the above identified application failed to meet the requirements of 35 U.S.C. 371 and 37 CFR 1.495, and is ABANDONED AS TO THE UNITED STATES OF AMERICA.

VONDA M WALLACE

Telephone: (703) 308-9140 EXT 225

PART 3 - OFFICE COPY

FORM PCT/DO/EO/909 (371 Abandonment Notice)



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of)
) Group Art Unit: TBA
Progulske-Fox)
) Examiner: TBA
Serial No. 09/980,845)
) Atty. Dckt. No.: 00-505-B
International Filing Date: Aug. 4, 2000)
) Intl. Appl. No.: PCT/US00/2130
Priority Date: Aug. 6, 1999)

For: **MICROBIAL POLYNUCLEOTIDES EXPRESSED DURING INFECTION OF A HOST**

STATEMENT UNDER 37 C.F.R. §1.821


Honorable Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

Enclosed is a written copy and a computer-readable copy of the sequence listing in the above mentioned case. The information recorded in computer readable form is identical to the written sequence listing. No new matter is added by the sequence listing.

Respectfully submitted,

Date: 3-27-02

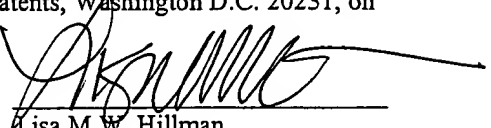
By: 
Lisa M. W. Hillman
Reg. No. 43,673

MCDONNELL, BOEHNEN,
HULBERT & BERGHOFF
300 South Wacker Drive
Chicago, IL 60606
(312) 913-0001

CERTIFICATE OF MAILING (37 C.F.R. 1.8a)

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to the Assistant Commissioner of Patents, Washington D.C. 20231, on 3-27-02.

Date: 3-27-02


Lisa M. W. Hillman



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
(00-505-B)

In re the Application of: Progulske-Fox)	
)	
Serial No: 09/980,845	)	Group Art Unit: TBA
)	
Filed: August 4, 2000	)	Examiner: TBA
)	
For: Microbial Polynucleotides Expressed)	
During Infection of a Host)	
)	

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

STATEMENT UNDER 37 C.F.R. § 1.821(f)

Sir/Madam:

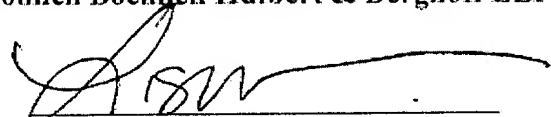
The undersigned declares that the content of the Sequence Listing, submitted in the above-identified application in compliance with 37 C.F.R. § 1.52(e) on Compact Disc-Recordable (CD-R) medium in duplicate (COPY 1 and COPY 2) in lieu of the paper copy under 37 C.F.R. § 1.821(c) and the computer readable form copy of the Sequence Listing, submitted in the above-identified application in accordance with 37 C.F.R. 1.821(e), are identical in content. The sequence listing, submitted herewith, does not extend beyond the scope of the specification, and thus, does not contain new matter.

Respectfully submitted,

McDonnell Boehnen Hulbert & Berghoff LLP

Dated: March 16, 2006

By:


Lisa M.W. Hillman
Reg. No. 43,673



SEQUENCE LISTING

<10> Handfield, Martin
Brady, Jeannine
Progulske-Fox, Ann
Hillman, Jeffrey D.

<120> Microbial Polynucleotides Expressed During Infection of
a Host

<130> MBHB00-505B

<140>

<141>

<150> 60/147,551

<151> 1999-08-06

<150> PCT/US00/21340

<151> 2000-08-04

<160> 20

<170> PatentIn Ver. 2.1

<210> 1

<211> 849

<212> DNA

<213> Actinobacillus actinomycetemcomitans

<220>

<221> misc_feature

<222> (566)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (625)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (627)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (636)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (650)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (656)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (661)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (672)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (681)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (720)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (723)
<223> N stands for any nucleotide.

<400> 1
gatcgcgtaa acggtgtaac acggaaagca attgtttaat gtcggcaaaa tgcagccctg 60
tggtcgggttc gtccagaata tacagggttt tgcccgatc ccgtttggag agttccgctc 120
ccagtttcac ccgttgccgt tccccgccgg acagggtggt agaggattgc cccaagcgaa 180
tataagacaa gccacgtca atcagggttt gcaatttacg cgcaatcatt ggaatggcat 240
cgaaaaactc gcgcgcacat tccaccgtca tgtccagcac ctgatgaatg gttttacctt 300
tgtagcggat ttccagggtt tcgcgattgt aacgcttgcc tttacattgg tcgcaaggca 360
cgtacacatc gggcaggaag tgcatttcca ctttgattac gccgtcgccc tggcaggctt 420
acagcgcccg ccgcgcacgt taaaactgaa acgccccggg ttataaccgc gcgcacgggc 480
tttcggtacg ccggcaaaca attcgcgaat cggcgtgaat acgcccgtgt aagttgcccg 540
gttggagcgt ggcgtgcgtc caatcnggct ttggttaata tcaatacttt atcgaaaaat 600
tccaaacctt taatggactt gtacnngaa acctcngcat tttctgcacn attaangcgt 660
nttgtgcaat anggaacaaa ntgtcgtaa tcagtgtaga atttacctta accggacacn 720
ccngtgatgc aggtaaataa gccacggga atgtctaaat tgacgttttt caggttggtta 780
ccggaagcgc cgaacaattt gagcattttt ttcttatcaa gtgcggtacg ttttttcggt 840
atttcgatc 849

<210> 2
<211> 357
<212> DNA
<213> Actinobacillus actinomycetemcomitans

<400> 2
gatcactaag ttgttcaatc ctttcgcttg ggaatctttg tctaaatacg gtttatgttg 60
cattgcgtta acgtctaaat cacctttaga cactgcagtg tttggcaagg cgtagtcatg 120
aataaaacgt attctacgtc taagttgtat ttttcttttg ccactttcgc tgcgatttca 180
gccacttggt gttccggtcc tgccatcacg ccactttga ttgttgccgg ggcttctgcc 240
gccggtttgt ctgccggtgc ggcttccggt tttttctctt cattacaagc ccgttaaggc 300

gaatacggag gctaattgttg cgacgcctaa taattttttt caagttcata aaagatc 357

<210> 3
<211> 886
<212> DNA
<213> Actinobacillus actinomycetemcomitans

<220>
<221> misc_feature
<222> (554)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (596)
<223> N stands for any nucleotide.

<400> 3
gatcaaaactg gtggcgcaag ggcagcgcgt agcaaattta cccgatattt tgggtctatgc 60
gcgcgtcggc aacggcatgg tagggcgacg ccgtgggtta aaccaagcca aagcggaatg 120
gcgcttattt aagctaaaac accatcttgg cattcagga tttttatccg ggctattcac 180
ttttgtcctg cgttccggtg ccagattatt gccgacatca ttactgaaaa acatctatca 240
aaccttttta agaaaaataac atgatgaaat taaactgtat tttaaaaata tccggaattt 300
ccaccgcact ttttctagcg ggttggtcct caaattcaag tgcgccgacg caatcctctg 360
agcaggcgaa ttctgttacg gctgtgaatc ccactgcggt gtacagtaag ccccgactt 420
tggataactt caacgattat gtgaatttct taaaaggtaa agcagcggca gaaggcggtt 480
ctgccgacgt attgaatgca caaaataata ttaattatat tcaaaaatcc gtggatttgg 540
acgatcaaca agcnggcaga attcgcaagc gtgatccaaa tgccccgccg atcatnaatt 600
ccgaacggca cgaccaatta cttaaactcg gtattaacca agaataaagt agacacggca 660
gaagcacgtt attgggaaca attgccgcag cttgaaaatg cttcaaagaa attcagcgta 720
ccgaaaaatt atctgttagc cttgtggggc atggagagta gctttggcta ttatcagggc 780
aattacgatg tgttatccac cttagccact cttgcttttg acggacgccg tgaagcctta 840
ttcagcaaag aattcatcgc cgccatgaaa atgctacagc gcgatc 886

<210> 4
<211> 507
<212> DNA
<213> Actinobacillus actinomycetemcomitans

<220>
<221> misc_feature
<222> (4)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (9)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (21)
<223> N stands for any nucleotide.

<220>


```

<221> misc_feature
<222> (23)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (29)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (32)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (35)..(36)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (39)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (42)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (45)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (49)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (52)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (58)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (61)..(62)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (65)

```

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (69)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (73)

<223> N stands for any polynucleotide.

<220>

<221> misc_feature

<222> (97)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (102)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (138)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (457)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (459)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (467)

<223> N stands for any nucleotide.

<400> 4

```
ttgntaccnt agccgctgac nanaactanc angcnnctgna tnatntcgna tnattaanat 60
nngcnaggng cancagctta cttttgccga cggttcnctg tntgaaagcg ccattcgcaa 120
agtgccggtg gaggcggnga aaattcactc acttggtgcg gaaggcaatg atgtgggatt 180
gaaagcccat catggcgggt ggataaagcg ttatttttta tgtcggcaga tgcctttcct 240
gcgttaaagt cgttattaga cgaaaatttt tcgtatcagg acacagcagt ttacggcgag 300
aattttgtgg tttccgcgct gaatgaagat tccgtgtgtg tgggcgatat ttatcaaadc 360
ggctcctgcy tgggtggagg gtcgcagccg cgtaaaccct gtgagcgctt atcgaaaaat 420
accaataatc cgaacacgca acaaaccgtg tacgctncng ctggtcnggc tggatatgtgc 480
cggtggtacc ccaaggggga aattcaa 507
```

<210> 5

<211> 1087

<212> DNA

<213> Actinobacillus actinomycetemcomitans

<220>

<221> misc_feature

<222> (622)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (642)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (661)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (669)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (685)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (690)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (700)

<223> N stands for any nucleotide.

<400> 5

```
gatcgcaaca agcgcagttt ctatatattcc gccgcccgcga gtgagatttt caatttaatc 60
gttgccaaac gtattgaact cagtctggcg cagcaggtct taaatggaga cgttttgcaa 120
ctgaacggtt cgcacagttg gtttgtggcg gacgcacgg aagatttgac gcaactgcaa 180
caacgcttgg cacaacggga tattttgctt accgcaccgc ttatcggcga agaggacaaa 240
agtgcggtgg attttgagaa tgaaattttt gtcgcgcacc aagccttggt ccatttgatg 300
cggcaagaac gcgtgaaagc cgcccgcgtt ccgattttta tgaggcgca acagtttcaa 360
tggcaatttg aaccgaacgg tttggcctt aaattttatt tgccggcagg cagttacgcc 420
acggcggttg tacgcgagct ggtgaatggt gaaaactgaa aaacgagaag aaaaacagga 480
ataacaagaa catgaatatt ttattaagta acgatgacgg cattcacgcg ccgggcattc 540
gtgtgatggc agaacattgc gtaagattgc caatgtgacc atcgtcgcgc cggacagcaa 600
ccgcaagcgc cgccttcagt tnccttaacct tgggtgaagcc gntgtattcc gttcatttg 660
naaagcggng attattgcgt caacngcacn cccggcggan tgcgtgcata ttgccctgac 720
gggttttctt tccgggcgca tcgatttggg gatttccggc atcaacgccg gggcgaacct 780
gggcgatgat gtgctatatt ccggcacggt cgcggcagca tttgaagggc gtcattctgg 840
cttgccgtct attgcggtat cgctcgatgg tcgtcaacat tttgaaacgg cggcgcgcg 900
ggtatgcgat ttggtgccga aattacacgc ccaattatta ggcaaacacg aaattctgaa 960
tattaacgtg cccgatgtgc cttacgaaga actgaaaggc attaaagtgt gccatttggg 1020
ctaccgttct tccgcttctg aagtgattaa acagcaaagc ccgcgtggcg aagacatgta 1080
ttggatc 1087
```

<210> 6
 <211> 681
 <212> DNA
 <213> Actinobacillus actinomycetemcomitans

<220>
 <221> misc_feature
 <222> (609)
 <223> N stands for any nucleotide.

<220>
 <221> misc_feature
 <222> (614)
 <223> N stands for any nucleotide.

<220>
 <221> misc_feature
 <222> (651)
 <223> N stands for any nucleotide.

<220>
 <221> misc_feature
 <222> (665)
 <223> N stands for any nucleotide.

<400> 6
 gatctgccgt tggcgaaccc ttacgaaatg ctgatcctcg cgtccatcgt ggaaaaagaa 60
 accggcattg ctgcagaacg cccacaagtg gcgtcgggtat tcattaatcg gttaaaagcc 120
 aaaatgaagc tgcaaaccga tccgaccgtc atttacggca tgggcgacga ctacaacggc 180
 aatattcgca aaaaagattt ggaaacgcca acgccttata acacctatgt gattgacggc 240
 ttgccgccga caccgattgc gatgccgagt gaagaggcgt tacaggcggg ggcacatccg 300
 gcgcaaaccg cgttttatta tttcgtggca gacggcacgg ggggacacaa attcagtcgt 360
 aattttaaacy aacataacaa agcgggtgcag caatatttgc gctggtaccg cgaacaaaac 420
 ggaaaataat atggtaggca aattttattgt cattgaaggc ttggaaggcg caggcaaaag 480
 caccgctcat caatgcgttg tggatacggt aaaaacgtta ggtgttgggg aagtcattctc 540
 taccgcgag cggggcggca caccggttg cggaagct acgccatctc attaaacatg 600
 aaaaccaana gccngtgacc cgataaagcg gaattactca tgctgtatgc ngccgcctgc 660
 aatngtggg aaaatgtgat c 681

<210> 7
 <211> 822
 <212> DNA
 <213> Actinobacillus actinomycetemcomitans

<220>
 <221> misc_feature
 <222> (532)
 <223> N stands for any nucleotide.

<220>
 <221> misc_feature
 <222> (630)
 <223> N stands for any nucleotide.

<220>
 <221> misc_feature
 <222> (696)
 <223> N stands for any nucleotide.

<220>
 <221> misc_feature
 <222> (710)
 <223> N stands for any nucleotide.

<220>
 <221> misc_feature
 <222> (722)
 <223> N stands for any nucleotide.

<220>
 <221> misc_feature
 <222> (725)
 <223> N stands for any nucleotide.

<400> 7
 gatcgcataaa aatcagcaag gcaaccactc ttaacaagaa ttgccatacc gtccaatatc 60
 gtcgcccaata ctgaatcgcg tagagcatgg ctaacgcaat catagcgcgt aaagtcggaa 120
 tagcaagccc cgccagttgg ctgtataaca acgcaaaaat gaatccgcac agaatcggaa 180
 atgtcgggct gatgtaacgc gtcggcaagg caaattgcag tagacgcgcc aaggtaaaac 240
 ccagcatcat cgccagtcgg atatgcagcc ctgaaatggc aattaaatgc gccgtatttg 300
 ttttttgata aatttgccaa gttttttggt ctaagcggaa acgttcgcca aaaccgagtg 360
 ccagcaacaa gccttgctcg ggtaaattct ccgtttgttg taaggcttga ttgagagcgg 420
 tttggcgtaa cgaaaaaacg ttttccaatt tgaccgcact tttaatctct gcccaagcgg 480
 tgatgtgctt gccgaaatac catggctggc ggtcaaaacc gtcaaaattc angcggggaag 540
 aaagcgctcg caagcgtaaa ttgctgcgt aacgttcgcc cgggggttgac tggttgcttg 600
 agtttccatt gcgcgtaaat acgttggtcn gggaagattt tcggcgaagt tttggcgccg 660
 aataaccagc ggggttgata atgctgctga tgccanaaat ttccttgacn ggtaaatttc 720
 cnggnggaac ggggttttcg cggcagattg gcaagattat ccgcctgggt cagtatggaa 780
 attgccgatt ggtggacgta agcggactga atcatcaaga tc 822

<210> 8
 <211> 949
 <212> DNA
 <213> Actinobacillus actinomycetemcomitans

<220>
 <221> misc_feature
 <222> (538)
 <223> N stands for any nucleotide.

<400> 8
 gatcagggttg ccgtaaccgc gtaaggcggtt acccgcgtaa accactcgac ctgcggcggc 60
 ggcattgact gcttgtctgc gagaaccact gatgtcgatg cctttgttac cgccgtcggc 120
 gttagagaaa ccttgaatca cattgccgtt ggtcggccag cgccatgcc cgttggtatc 180
 tgccgggtgcg gtgcccgcgtt gggttatcgg ctgattgggt gccgggtgcag cagtacctac 240
 gccggcttta atcgggcccg taatcgtgcc gtcggaacca tattgtgtgc cgtttgcgcc 300
 cgggggtgtaa gttacggctg gttcaccacc ttgcgtagcc ggttggtgga ccgtcgggtg 360
 catttgccgt gcagctttcg tttgcaccgt aaccgttgtg ccgcggctca cctttaaggt 420
 ttgtccgacg cttaagctgt aaggttcgga catattatc aacgccgcca attctttcac 480
 atccaaacca gaaatgtagg cgataaggaa catggtgtca cctttgcgta cggtatangt 540

```

ttcacctttg tagaaacctt tgttgatttg gctgtaatcc ggtgcggttag tggtcggggt 600
acctggaatg gtgaaatcct gggatgcctg ttgcgggtga attttccccg gcagggtggg 660
tttgcttaac ccggttggtg tttgcaatgc aaactggtga tacatcggtt gaaaaatcgg 720
ctgcggagta gattgtgcgc cggtcgcctg tagattgttc gactgggcaa tcggaccgtt 780
catcgaagcg ggtacattgc cttgttggtt ttgcgggtcc catgtgctat tgccgccatc 840
ggttgaaccg tccaccgggt gcatgagtcc cggggataag gtaccgtcgg cgttttccac 900
cggtgccggt gtattcgaag tacaggccgc taacacggca atgctgac 949

```

<210> 9

<211> 277

<212> DNA

<213> Actinobacillus actinomycescomitans

<400> 9

```

agagaaaaaa ccggaagccg caccggcaga caaacggcg gcagaagccc cggcaacaat 60
caaagtgggc gtgatggcag gaccggaaca ccaagtggct gaaatcgag cgaaagtggc 120
aaaagaaaaa tacaacttag acgtagaata cgttttattc atgactacgc cttgccaaac 180
actgcagtgt ctaaagggtga tttagacgtt aacgcaatgc aacataaacc gtatttagac 240
aaagattccc aagcgaaagg attgaacaac ttagtga 277

```

<210> 10

<211> 259

<212> DNA

<213> Actinobacillus actinomycescomitans

<400> 10

```

gatcaaaactg gtggcgcaag ggcagcgcgt agcaaattta cccgatattt tggctctatgc 60
gcgcgtcggc aacggcatgg tagggcgacg ccgtgggtta aaccaagcca aagcggaatg 120
gcgcttattt aagctaaaaac accatcttgg cattcaggga tttttatccg ggctattcac 180
ttttgtcctg cgttccgggt ccagattatt gccgacatca ttactgaaaa acatctatca 240
aaccttttta agaaaataa 259

```

<210> 11

<211> 459

<212> DNA

<213> Actinobacillus actinomycescomitans

<400> 11

```

gatcgcaaca agcgcagttt ctatatttcc gccgcccga gtgagatttt caatttaatc 60
gttgccaaac gtattgaact cagtctggcg cagcaggtct taaatggaga cgttttgcaa 120
ctgaacggtt cgcacagttg gtttgtggcg gacgcacgg aagatttgac gcaactgcaa 180
caacgcttgg cacaacggga tattttgctt accgcaccgc ttatcggcga agaggacaaa 240
agtgcggtgg attttgagaa tgaaattttt gtcgcgcacc aagccttggt ccatttgatg 300
cggcaagaac gcgtgaaagc cgcccggcgt ccgattttta tgcaggcgca acagtttcaa 360
tggcaatttg aaccgaacgg tttgcgcctt aaattttatt tgccggcagg cagttacgcc 420
acggcggttg tacgcgagct ggtgaatggt gaaaactga 459

```

<210> 12

<211> 596

<212> DNA

<213> Actinobacillus actinomycescomitans

<220>

<221> misc_feature
 <222> (131)
 <223> N stands for any nucleotide.

<220>
 <221> misc_feature
 <222> (151)
 <223> N stands for any nucleotide.

<220>
 <221> misc_feature
 <222> (170)
 <223> N stands for any nucleotide.

<220>
 <221> misc_feature
 <222> (178)
 <223> N stands for any nucleotide.

<220>
 <221> misc_feature
 <222> (194)
 <223> N stands for any nucleotide.

<220>
 <221> misc_feature
 <222> (199)
 <223> N stands for any nucleotide.

<220>
 <221> misc_feature
 <222> (209)
 <223> N stands for any nucleotide.

<400> 12
 atgaatattt tattaagtaa cgatgacggc attcacgcgc cgggcattcg tgtgatggca 60
 gaacattgcg taagattgcc aatgtgacca tcgtcgcgcc ggacagcaac cgcaagcgcc 120
 gccttcagtt ncttaacctt ggtgaagccg ntgtattccg ttcatttggg aaagcggnga 180
 ttattgcgtc aacngcacnc ccggcggant gcgtgcatat tgccctgacg ggttttcttt 240
 ccgggcgcat cgatttggtg atttccggca tcaacgccgg ggccaacctg ggcgatgatg 300
 tgctatattc cggcacggtc gcggcagcat ttgaagggcg tcatctgggc ttgccgtcta 360
 ttgcggtatc gctcgatggt cgtcaacatt ttgaaacggc ggcgcgcggt gtatgcgatt 420
 tgggtgccgaa attacacgcc caattattag gcaaacacga aattctgaat attaacgtgc 480
 ccgatgtgcc ttacgaagaa ctgaaaggca ttaaagtgtg ccatttgggc taccgttctt 540
 ccgcttctga agtgattaaa cagcaaagcc cgcgtggcga agacatgtat tggatc 596

<210> 13
 <211> 429
 <212> DNA
 <213> Actinobacillus actinomycetemcomitans

<400> 13
 gatctgccgt tggcgaaccc ttacgaaatg ctgatcctcg cgtccatcgt ggaaaaagaa 60
 accggcattg ctgcagaacg cccacaagtg gcgtcggtat tcattaatcg gttaaaagcc 120
 aaaatgaagc tgcaaaccga tccgaccgtc atttacggca tgggcgacga ctacaacggc 180
 aatattcgca aaaaagattt ggaaacgcca acgccttata acacctatgt gattgacggc 240

ttgccgccga caccgattgc gatgccgagt gaagaggcgt tacaggcggt ggcacatccg 300
 gcgcaaacgg cgttttatta tttcgtggca gacggcacgg ggggacacaa attcagtcgt 360
 aatttaaacg aacataacaa agcgggtgcag caatatttgc gctggtaccg cgaacaaaac 420
 ggaaaataa 429

<210> 14
 <211> 162
 <212> DNA
 <213> Actinobacillus actinomycescomitans

<400> 14
 atggtaggca aatttattgt cattgaaggc ttggaaggcg caggcaaaag caccgctcat 60
 caatgcgttg tggatacgtt aaaaacgtta ggtgttgggg aagtcatttc taccgcgag 120
 ccgggcggca caccggttg cggaaaagct acgcatctc at 162

<210> 15
 <211> 67
 <212> PRT
 <213> Actinobacillus actinomycescomitans

<400> 15
 Glu Lys Lys Pro Glu Ala Ala Pro Ala Asp Lys Pro Ala Ala Glu Ala
 1 5 10 15
 Pro Ala Thr Ile Lys Val Gly Val Met Ala Gly Pro Glu His Gln Val
 20 25 30
 Ala Glu Ile Ala Ala Lys Val Ala Lys Glu Lys Tyr Asn Leu Asp Val
 35 40 45
 Glu Tyr Val Leu Phe Met Thr Thr Pro Cys Gln Thr Leu Gln Cys Leu
 50 55 60
 Lys Val Ile
 65

<210> 16
 <211> 85
 <212> PRT
 <213> Actinobacillus actinomycescomitans

<400> 16
 Ile Lys Leu Val Ala Gln Gly Gln Arg Val Ala Asn Leu Pro Asp Ile
 1 5 10 15
 Leu Val Tyr Ala Arg Val Gly Asn Gly Met Val Gly Arg Arg Arg Gly
 20 25 30
 Leu Asn Gln Ala Lys Ala Glu Trp Arg Leu Phe Lys Leu Lys His His
 35 40 45
 Leu Gly Ile Gln Gly Phe Leu Ser Gly Leu Phe Thr Phe Val Leu Arg
 50 55 60

Ser Gly Ala Arg Leu Leu Pro Thr Ser Leu Leu Lys Asn Ile Tyr Gln
65 70 75 80

Thr Phe Leu Arg Lys
85

<210> 17

<211> 152

<212> PRT

<213> Actinobacillus actinomycetemcomitans

<400> 17

Asp Arg Asn Lys Arg Ser Phe Tyr Ile Ser Ala Ala Arg Ser Glu Ile
1 5 10 15

Phe Asn Leu Ile Val Ala Lys Arg Ile Glu Leu Ser Leu Ala Gln Gln
20 25 30

Val Leu Asn Gly Asp Val Leu Gln Leu Asn Gly Ser His Ser Trp Phe
35 40 45

Val Ala Asp Ala Ser Glu Asp Leu Thr Gln Leu Gln Gln Arg Leu Ala
50 55 60

Gln Arg Asp Ile Leu Leu Thr Ala Pro Leu Ile Gly Glu Glu Asp Lys
65 70 75 80

Ser Ala Val Asp Phe Glu Asn Glu Ile Phe Val Ala His Gln Ala Leu
85 90 95

Phe His Leu Met Arg Gln Glu Arg Val Lys Ala Ala Arg Arg Pro Ile
100 105 110

Leu Met Gln Ala Gln Gln Phe Gln Trp Gln Phe Glu Pro Asn Gly Leu
115 120 125

Arg Leu Lys Phe Tyr Leu Pro Ala Gly Ser Tyr Ala Thr Ala Leu Val
130 135 140

Arg Glu Leu Val Asn Val Glu Asn
145 150

<210> 18

<211> 198

<212> PRT

<213> Actinobacillus actinomycetemcomitans

<220>

<221> UNSURE

<222> (43)

<223> Xaa stands for any amino acid.

<220>

<221> UNSURE

<222> (50)

<223> Xaa stands for any amino acid.

<220>

<221> UNSURE

<222> (59)

<223> Xaa stands for any amino acid.

<220>

<221> UNSURE

<222> (66)

<223> Xaa stands for any amino acid.

<220>

<221> UNSURE

<222> (69)

<223> Xaa stands for any amino acid.

<400> 18

Met Asn Ile Leu Leu Ser Asn Asp Asp Gly Ile His Ala Pro Gly Ile
1 5 10 15

Arg Val Met Arg Thr Leu Arg Lys Ile Ala Asn Val Thr Ile Val Ala
20 25 30

Pro Asp Ser Asn Arg Lys Arg Arg Leu Gln Xaa Leu Asn Leu Gly Glu
35 40 45

Ala Xaa Val Phe Arg Ser Phe Gly Lys Ala Xaa Ile Ile Ala Ser Thr
50 55 60

Ala Xaa Pro Ala Xaa Cys Val His Ile Ala Leu Thr Gly Phe Leu Ser
65 70 75 80

Gly Arg Ile Asp Leu Val Ile Ser Gly Ile Asn Ala Gly Ala Asn Leu
85 90 95

Gly Asp Asp Val Leu Tyr Ser Gly Thr Val Ala Ala Ala Phe Glu Gly
100 105 110

Arg His Leu Gly Leu Pro Ser Ile Ala Val Ser Leu Asp Gly Arg Gln
115 120 125

His Phe Glu Thr Ala Ala Arg Val Val Cys Asp Leu Val Pro Lys Leu
130 135 140

His Ala Gln Leu Leu Gly Lys His Glu Ile Leu Asn Ile Asn Val Pro
145 150 155 160

Asp Val Pro Tyr Glu Glu Leu Lys Gly Ile Lys Val Cys His Leu Gly
165 170 175

Tyr Arg Ser Ser Ala Ser Glu Val Ile Lys Gln Gln Ser Pro Arg Gly
180 185 190

Glu Asp Met Tyr Trp Ile
195

<210> 19
 <211> 142
 <212> PRT
 <213> Actinobacillus actinomycetemcomitans

<400> 19
 Asp Leu Pro Leu Ala Asn Pro Tyr Glu Met Leu Ile Leu Ala Ser Ile
 1 5 10 15
 Val Glu Lys Glu Thr Gly Ile Ala Ala Glu Arg Pro Gln Val Ala Ser
 20 25 30
 Val Phe Ile Asn Arg Leu Lys Ala Lys Met Lys Leu Gln Thr Asp Pro
 35 40 45
 Thr Val Ile Tyr Gly Met Gly Asp Asp Tyr Asn Gly Asn Ile Arg Lys
 50 55 60
 Lys Asp Leu Glu Thr Pro Thr Pro Tyr Asn Thr Tyr Val Ile Asp Gly
 65 70 75 80
 Leu Pro Pro Thr Pro Ile Ala Met Pro Ser Glu Glu Ala Leu Gln Ala
 85 90 95
 Val Ala His Pro Ala Gln Thr Ala Phe Tyr Tyr Phe Val Ala Asp Gly
 100 105 110
 Thr Gly Gly His Lys Phe Ser Arg Asn Leu Asn Glu His Asn Lys Ala
 115 120 125
 Val Gln Gln Tyr Leu Arg Trp Tyr Arg Glu Gln Asn Gly Lys
 130 135 140

<210> 20
 <211> 54
 <212> PRT
 <213> Actinobacillus actinomycetemcomitans

<400> 20
 Met Val Gly Lys Phe Ile Val Ile Glu Gly Leu Glu Gly Ala Gly Lys
 1 5 10 15
 Ser Thr Ala His Gln Cys Val Val Asp Thr Leu Lys Thr Leu Gly Val
 20 25 30
 Gly Glu Val Ile Ser Thr Arg Glu Pro Gly Gly Thr Pro Val Gly Gly
 35 40 45
 Lys Ala Thr Pro Ser His
 50



JC05 Rec'd PCT/PTO 08 APR 2002

Hon. Commissioner of
Patents and Trademarks

S/N 09/980,845

Atty LMWH

Re: Applicant - Progulsk-Fox, et al.

Case No. 00-505-B

Microbial Polynucleotides Expressed During Infection Of A Host

Sir:

Please place the Patent Office receipt stamp hereon and mail to acknowledge receipt of:

- ☒ Transmittal Letter
- ☒ Signed Declaration
- ☒ Filing Fee Check
- ☒ Other Response to Notice to File Missing Parts: Statement Under 37 CFR § 1.821:

Diskette and paper copy of sequence listing.

Fee Enclosed

\$ 65.00
March 27, 2002

Respectfully,
McDonnell Bochnen Hulbert & Berghoff
Attorney for Applicant





UNITED STATES PATENT AND TRADEMARK OFFICE



Commissioner for Patents, Box PCT
 United States Patent and Trademark Office
 Washington, D.C. 20231
 www.uspto.gov

U.S. APPLICATION NUMBER NO. 09/980,845	FIRST NAMED APPLICANT Ann Progulske-Fox	ATTY. DOCKET NO. 00-505-B
---	--	------------------------------

INTERNATIONAL APPLICATION NO. PCT/US00/21340	
I.A. FILING DATE 08/04/2000	PRIORITY DATE 08/06/1999

Lisa M.W. Hillman
 McDonnell Boehnen Hulbert & Berghoff
 300 S Wacker Drive Suite 3200
 Chicago, IL 60606

CONFIRMATION NO. 3701

371 FORMALITIES LETTER



OC000000008256428

Date Mailed: 06/12/2002

NOTIFICATION OF DEFECTIVE RESPONSE

The following items have been submitted by the applicant or the IB to the United States Patent and Trademark Office as a Designated Office (37 CFR 1.494):

- U.S. Basic National Fee
- Indication of Small Entity Status
- Priority Document
- Biochemical Sequence Diskette
- Biochemical Sequence Listing
- Copy of IPE Report
- Copy of references cited in ISR
- Copy of the International Application
- Copy of the International Search Report
- Information Disclosure Statements
- Oath or Declaration
- Request for Immediate Examination
- Small Entity Statement

DOCKETED

JUN 20 2002
 2nd Ext. Missing Parts
 DUE DATE: 6/28/02
 BY: KB CB

The following items **MUST** be furnished within the period set forth below in order to complete the requirements for acceptance under 35 U.S.C. 371:

Applicant is required to complete the response within a time limit of ONE MONTH from the date of this Notification or within the time remaining in the response set forth in the Notification of Missing Requirements, whichever is the longer. No extension of this time limit may be granted under 37 CFR 1.136, but the period for response set in the Notification of Missing Requirements may be extended under 37 CFR 1.136(a).

The following items **MUST** be furnished within the period set forth below:

- The nucleotide and/or amino acid sequence disclosure contained in this application does not comply with the requirements for such a disclosure as set forth in 37 CFR 1.821-1.825 for the following reason(s):

- A copy of the "Sequence Listing" in computer readable form has been submitted. The content of the computer readable form, however, does not comply with the requirements of 37 CFR 1.822 and/or 1.832, as indicated on the attached marked-up copy of the "Raw Sequence Listing."
 - The computer readable form that has been filed with this application has been found to be damaged and/or unreadable as indicated on the attached CRF Diskette Problem Report. A substitute computer readable form must be submitted as required by 37 CFR 1.825(d).
 - APPLICANT MUST PROVIDE:
 - An initial or substitute computer readable form (CRF) of the "Sequence Listing."
 - An initial or substitute paper copy or compact disc of the "Sequence Listing," as well as an amendment directing its entry into the specification.
- For questions regarding compliance to 37 CFR 1.821-1.825 requirements, please contact:
- For Rules Interpretation, call (703) 308-4216
 - To Purchase PatentIn Software, call (703) 306-2600
 - For PatentIn Software Program Help, call (703) 306-4119 or e-mail at patin21help@uspto.gov or patin3help@uspto.gov

- A copy of the "Sequence Listing" in computer readable form has been submitted. The content of the computer readable form, however, does not comply with the requirements of 37 CFR 1.822 and/or 1.832, as indicated on the attached marked-up copy of the "Raw Sequence Listing."
- The computer readable form that has been filed with this application has been found to be damaged and/or unreadable as indicated on the attached CRF Diskette Problem Report. A substitute computer readable form must be submitted as required by 37 CFR 1.825(d).

Applicant is reminded that any communications to the United States Patent and Trademark Office must be mailed to the address given in the heading and include the U.S. application no. shown above (37 CFR 1.5)

*A copy of this notice **MUST** be returned with the response.*

VONDA M WALLACE

Telephone: (703) 305-3736

PART 1 - ATTORNEY/APPLICANT COPY

U.S. APPLICATION NUMBER NO.	INTERNATIONAL APPLICATION NO.	ATTY. DOCKET NO.
09/980,845	PCT/US00/21340	00-505-B



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of)	
	)	Group Art Unit: TBA
Progulske-Fox)	
	)	Examiner: TBA
Serial No. 09/980,845)	
	)	Atty. Dckt. No.: 00-505-B
International Filing Date: Aug. 4, 2000)	
	)	Intl. Appl. No.: PCT/US00/2130
Priority Date: Aug. 6, 1999)	

For: **MICROBIAL POLYNUCLEOTIDES EXPRESSED DURING INFECTION OF A HOST**

TRANSMITTAL LETTER

Asst. Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

In regard to the above identified application,

1. We are transmitting herewith the attached:
 - a) Response to Notice of Defective Response;
 - b) Written copy of sequence listing;
 - c) Computer Readable copy of sequence listing; and
 - d) Return postcard
2. With respect to fees:
 - a) It is believed no fee is due at this time.
 - b) Please charge any underpayment or credit any overpayment our Deposit Account, No. 13-2490.
3. GENERAL AUTHORIZATION: Please charge any additional fees or credit overpayment to Deposit Account No. 13-2490. A duplicate copy of this sheet is enclosed.
4. CERTIFICATE OF MAILING UNDER 37 CFR § 1.8: The undersigned hereby certifies that this Transmittal Letter and the paper, as described in paragraph 1, are being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to the Asst. Commissioner for Patents, Washington, D.C. 20231 on June 24, 2002.

Date: June 24, 2002

Respectfully submitted,

Lisa M.W. Hillman
Registration No. 43,673



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of)	
Progulske-Fox	)	Group Art Unit: TBA
)	
Serial No. 09/980,845	)	Examiner: TBA
)	
International Filing Date: Aug. 4, 2000	)	Atty. Dckt. No.: 00-505-B
)	
Priority Date: Aug. 6, 1999	)	Intl. Appl. No.: PCT/US00/2130

For: **MICROBIAL POLYNUCLEOTIDES EXPRESSED DURING INFECTION OF A HOST**

RESPONSE TO NOTICE OF DEFECTIVE RESPONSE

Honorable Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

This paper is filed in response to the Notification of Defective Response mailed on June 12, 2002, in the above-mentioned case. It is believed that no fee is due in connection with this filing; however, if a fee is due please charge our deposit account number 13-2490.

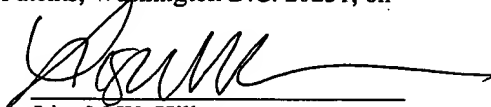
Enclosed is a written copy and a computer-readable copy of the sequence listing in the above mentioned case. The information recorded in computer readable form is identical to the written sequence listing. No new matter is added by the sequence listing. Applicants respectfully request that the specification of the application be amended by

CERTIFICATE OF MAILING (37 C.F.R. 1.8a)

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to the Assistant Commissioner of Patents, Washington D.C. 20231, on

6/24/02.

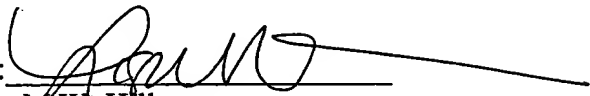
Date: 6/24/02


Lisa M. W. Hillman

deleting the previously filed sequence listing and the entry of the enclosed sequence listing.

Respectfully submitted,

Date: 6/24/02

By: 
Lisa M.W. Hillman
Reg. No. 43,673

MCDONNELL, BOEHNEN,
HULBERT & BERGHOFF
300 South Wacker Drive
Chicago, IL 60606
(312) 913-0001



SEQUENCE LISTING

<110> Handfield, Martin
Brady, Jeannine
Progulske-Fox, Ann
Hillman, Jeffrey D.

<120> Microbial Polynucleotides Expressed During Infection of
a Host

<130> MBHB00-505B

<140>

<141>

<150> 60/147,551

<151> 1999-08-06

<150> PCT/US00/21340

<151> 2000-08-04

<160> 20

<170> PatentIn Ver. 2.1

<210> 1

<211> 849

<212> DNA

<213> Actinobacillus actinomycetemcomitans

<220>

<221> misc_feature

<222> (566)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (625)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (627)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (636)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (650)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (656)
 <223> N stands for any nucleotide.

<220>
 <221> misc_feature
 <222> (661)
 <223> N stands for any nucleotide.

<220>
 <221> misc_feature
 <222> (672)
 <223> N stands for any nucleotide.

<220>
 <221> misc_feature
 <222> (681)
 <223> N stands for any nucleotide.

<220>
 <221> misc_feature
 <222> (720)
 <223> N stands for any nucleotide.

<220>
 <221> misc_feature
 <222> (723)
 <223> N stands for any nucleotide.

<400> 1
 gatcgcgtaa acggtgtaac acggaaagca attgtttaat gtcggcaaaa tgcagccctg 60
 tggtcgggttc gtccagaata tacaggggtt tgcccgtatc ccgtttggag agttccgctc 120
 ccagtttcac ccgttgcgct tccccgccgg acaggggtgt agaggattgc cccaagcgaa 180
 tataagacaa gccacggtca atcaggggtt gcaatttacg cgcaatcatt ggaatggcat 240
 cgaaaaactc gcgcgcatct tccaccgtca tgtccagcac ctgatgaatg gttttacctt 300
 tgtagcggat ttccaggggt tgcgcatgtt aacgcttgcc tttacattgg tgcgaaggca 360
 cgtacacatc gggcaggaag tgcatttcca ctttgattac gccgtcgccc tggcaggctt 420
 acagcgcccg ccgcgcacgt taaaactgaa acgccccggg ttataaccgc gcgcacgggc 480
 tttcggtagc ccggcaaaca attcgcgaat cggcgtgaat acgcccgtgt aagttgcccc 540
 gttggagcgt ggcgtgcgtc caatcnggct ttggttaata tcaatacttt atcgaaaaat 600
 tccaaacctt taatggactt gtacngngaa acctcngcat tttctgcacn attaangcgt 660
 nttgtgcaat anggaacaaa ntgtcgtaa tcagtgtaga atttacctta accggacacn 720
 ccngtgatgc aggtaaataa gccacggga atgtctaaat tgacgttttt caggttgtta 780
 ccggaagcgc cgaacaattt gagcattttt ttcttatcaa gtgcggtacg ttttttcggt 840
 atttcgatc 849

<210> 2
 <211> 357
 <212> DNA
 <213> Actinobacillus actinomycetemcomitans

<400> 2
 gatcactaag ttgttcaatc ctttcgcttg ggaatctttg tctaaatacg gtttatgttg 60
 cattgcgtta acgtctaaat cacctttaga cactgcagtg tttggcaagg cgtagtcatg 120
 aataaaacgt attctacgtc taagttgtat ttttcttttg ccactttcgc tgcgatttca 180
 gccacttggg gttccggtcc tgccatcacg ccacttttga ttgttgccgg ggcttctgcc 240
 gccggtttgt ctgccggtgc ggcttccggt tttttctctt cattacaagc ccgttaaggc 300

gaatacggag gctaattgtt cgacgcctaa taattttttt caagttcata aaagatc 357

<210> 3
<211> 886
<212> DNA
<213> Actinobacillus actinomycescomitans

<220>
<221> misc_feature
<222> (554)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (596)
<223> N stands for any nucleotide.

<400> 3
gatcaaactg gtggcgcaag ggcagcgcgt agcaaattta cccgatattt tgggtctatgc 60
gcgcgctcggc aacggcatgg tagggcgacg cgttggttta aaccaagcca aagcgggaatg 120
gcgcttattt aagctaaaac accatcttgg cattcaggga tttttatccg ggctattcac 180
ttttgtcctg cgttcgggtg ccagattatt gccgacatca ttactgaaaa acatctatca 240
aaccttttta agaaaataac atgatgaaat taaactgtat tttaaaaata tccggaattt 300
ccaccgcaact tttctagcg ggttggttct caaattcaag tgcgcgcgacg caatcctctg 360
agcaggcgaa ttctgttacg gctgtgaatc ccaactgcgt gtacagtaag ccccgcaactt 420
tggaataact caacgattat gtgaatttct taaaaggtaa agcagcggca gaaggcggtt 480
ctgccgacgt attgaatgca caaaataata ttaattatat tcaaaaatcc gtggatttgg 540
acgatcaaca agcnggcaga attcgcaagc gtgatccaaa tgccccgcgcg atcatnaatt 600
ccgaacggca cgaccaatta cttaaactcg gtattaacca agaataaagt agacacggca 660
gaagcacgtt attgggaaca attgcgcgag cttgaaaatg cttcaaagaa attcagcgta 720
ccgaaaaatt atctgttagc cttgtggggc atggagagta gctttggcta ttatcagggc 780
aattacgatg tggtatccac cttagccact cttgcttttg acggacgcgcg tgaagcctta 840
ttcagcaaag aattcatcgc cgccatgaaa atgctacagc gcgac 886

<210> 4
<211> 507
<212> DNA
<213> Actinobacillus actinomycescomitans

<220>
<221> misc_feature
<222> (4)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (9)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (21)
<223> N stands for any nucleotide.

<220>

```

<221> misc_feature
<222> (23)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (29)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (32)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (35)..(36)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (39)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (42)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (45)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (49)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (52)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (58)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (61)..(62)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (65)

```

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (69)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (73)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (97)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (102)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (138)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (457)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (459)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (467)

<223> N stands for any nucleotide.

<400> 4

```
ttgntaccnt agccgctgac nanaactanc angcnntgna tnatntcgna tnattaanat 60
nngcnaggng cancagctta cctttgccga cggttcnctg tntgaaagcg ccattcgcaa 120
agtgccggtg gaggcggnga aaattcactc acttggtgcg gaaggcaatg atgtgggatt 180
gaaagcccat catggcgggt ggataaagcg ttatTTTTTA tgcggcaga tgcctttcct 240
gcgttaaatg cgttattaga cgaaaatttt tcgtatcagg acacagcagt ttacggcgag 300
aatTTTgtgg tttccgcgct gaatgaagat tccgtgtgtg tgggcgatat ttatcaaata 360
ggctcctgcg tggtggaggt gtcgcagccg cgtaaaccct gtgagcgctt atcgaaaaat 420
accaataatc cgaacacgca acaaaccgtg tacgctncng ctggtcnngc tggtatgtgc 480
cgtgtgtacc ccaaggggga aattcaa 507
```

<210> 5

<211> 1087

<212> DNA

<213> Actinobacillus actinomycetemcomitans

<220>

<221> misc_feature

<222> (622)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (642)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (661)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (669)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (685)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (690)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (700)

<223> N stands for any nucleotide.

<400> 5

```
gatcgcaaca agcgcagttt ctatatattcc gccgcccgcga gtgagatttt caatttaatc 60
gttgccaaac gtattgaact cagtctggcg cagcaggtct taaatggaga cgttttgcaa 120
ctgaacggtt cgcacagttg gtttgtggcg gacgcacggg aagatttgac gcaactgcaa 180
caacgcttgg cacaacggga tattttgctt accgcaccgc ttatcggcga agaggacaaa 240
agtgcggttg attttgagaa tgaaattttt gtcgcgcacc aagccttggt ccatttgatg 300
cggcaagaac gcgtgaaagc cgcccgcggt ccgattttta tgcaggcgca acagtttcaa 360
tggcaatttg aaccgaacgg tttgcgcctt aaattttatt tgccggcgagg cagttacgcc 420
acggcggttg tacgcgagct ggtgaatgtt gaaaactgaa aaacgagaag aaaaacagga 480
ataacaagaa catgaatatt ttattaagta acgatgacgg cattcacgcg ccgggcattc 540
gtgtgatggc agaacattgc gtaagattgc caatgtgacc atcgtcgcgc cggacagcaa 600
ccgcaagcgc cgccttcagt tncctaacct tggatgaagcc gntgtattcc gttcatttgg 660
naaagcggng attattgcgt caacngcacn cccggcggan tgcgtgcata ttgccctgac 720
gggttttctt tccgggcgca tcgatttggt gatttccggc atcaacgccg gggcgaaact 780
gggcgatgat gtgctatatt ccggcacggg cgcggcagca tttgaaaggc gtcattctgg 840
cttgccgtct attgcggtat cgctcgatgg tcgtcaacat tttgaaacgg cggcgcgcgt 900
ggatgcgat ttggtgccga aattacacgc ccaattatta ggcaaacacg aaattctgaa 960
tattaacgtg cccgatgtgc cttacgaaga actgaaaggc attaaagtgt gccatttggg 1020
ctaccgttct tccgcttctg aagtgattaa acagcaaagc ccgcgtggcg aagacatgta 1080
ttggatc 1087
```

<210> 6
 <211> 681
 <212> DNA
 <213> Actinobacillus actinomycetemcomitans

<220>
 <221> misc_feature
 <222> (609)
 <223> N stands for any nucleotide.

<220>
 <221> misc_feature
 <222> (614)
 <223> N stands for any nucleotide.

<220>
 <221> misc_feature
 <222> (651)
 <223> N stands for any nucleotide.

<220>
 <221> misc_feature
 <222> (665)
 <223> N stands for any nucleotide.

<400> 6
 gatctgccgt tggcgaaccc ttacgaaatg ctgatcctcg cgtccatcgt ggaaaaagaa 60
 accggcattg ctgcagaacg cccacaagtg gcgtcgggtat tcattaatcg gttaaaagcc 120
 aaaatgaagc tgcaaaccga tccgaccgtc atttacggca tgggcgacga ctacaacggc 180
 aatattcgca aaaaagattt ggaaacgcca acgccttata acacctatgt gattgacggc 240
 ttgccgcgca caccgattgc gatgccgagt gaagaggcgt tacaggcggg ggcacatccg 300
 gcgcaaacgg cgttttatta ttctgtggca gacggcacgg ggggacacaa attcagtcgt 360
 aatttaaacy aacataacaa agcgggtgcag caatatattgc gctggtaccg cgaacaaaaac 420
 ggaaaataat atggtaggca aatttattgt cattgaaggc ttggaaggcg caggcaaaaag 480
 caccgctcat caatgcgttg tggatacgtt aaaaacgtta ggtggtgggg aagtcacatc 540
 taccgcgag ccgggcggca caccggttg cggaagagct acgccatctc attaaacatg 600
 aaaaccaana gccngtgacc cgataaagcg gaattactca tgctgtatgc ngccgcctgc 660
 aatnngtggg aaaatgtgat c 681

<210> 7
 <211> 822
 <212> DNA
 <213> Actinobacillus actinomycetemcomitans

<220>
 <221> misc_feature
 <222> (532)
 <223> N stands for any nucleotide.

<220>
 <221> misc_feature
 <222> (630)
 <223> N stands for any nucleotide.

<220>
 <221> misc_feature
 <222> (696)
 <223> N stands for any nucleotide.

<220>
 <221> misc_feature
 <222> (710)
 <223> N stands for any nucleotide.

<220>
 <221> misc_feature
 <222> (722)
 <223> N stands for any nucleotide.

<220>
 <221> misc_feature
 <222> (725)
 <223> N stands for any nucleotide.

<400> 7
 gatcgataaa aatcagcaag gcaaccactc ttaacaagaa ttgccatacc gtccaatata 60
 gtcgccaaata ctgaatcgcg tagagcatgg ctaacgcaat catagcgcg aaagtcggaa 120
 tagcaagccc cgccagttgg ctgtataaca acgcaaaaat gaatccgcac agaatcggaa 180
 atgtcgggct gatgtaacgc gtcggcaagg caaattgcag tagacgcgcc aaggtaaaac 240
 ccagcatcat cgccagtcgc atatgcagcc ctgaaatggc aattaaatgc gccgtatttg 300
 ttttttgata aatttgccaa gttttttggt ctaagcggaa acgttcgcca aaaccgagtg 360
 ccagcaacaa gccttgtcgg ggtaaattct ccgtttgttg taaggcttga ttgagagcgg 420
 tttggcgtaa cgaaaaaacg ttttccaatt tgaccgcact tttaatctct gcccaagcgg 480
 tgatgtgctt gccgaaatac catggctggc ggtcaaaaacc gtcaaaattc angcgggaag 540
 aaagcgcctc caagcgtaaa ttgcctgcgt aacgttcgcc cgggggttgac tggttgcttg 600
 agtttccatt gcgcgtaaat acgttggtcn gggaagattt tcggcgaagt tttggcgccg 660
 aataaccagc gggttggata atgtgctga tgccanaaat ttccttgacn ggtaaatttc 720
 cngngngaac gggttttcgg cggcagattg gcaagattat ccgcctgggt cagtatggaa 780
 attgccgatt ggtggacgta agcggactga atcatcaaga tc 822

<210> 8
 <211> 949
 <212> DNA
 <213> Actinobacillus actinomycetemcomitans

<220>
 <221> misc_feature
 <222> (538)
 <223> N stands for any nucleotide.

<400> 8
 gatcagggtt ccgtaaccgc gtaaggcggt acccgcgtaa accactcgac ctgcggcggc 60
 ggcattgact gcttgtctgc gagaaccact gatgtcgatg cctttgttac cgccgtcggc 120
 gttagagaaa ccttgaatca cattgccgtt ggtcggccag cgccatgcca cgttggatac 180
 tgcgggtgcg gtgcccgctt gggttatcgg ctgattggtt gccgggtgcag cagtacctac 240
 gccggcttta atcgggcccgg taatcgtgcc gtcggaacca tattgtgtgc cgtttgccgc 300
 cgggggtgtaa gttacggtcg gttcaaccac ttgcgtagcc ggttgggtga ccgtcgggtg 360
 catttgcggt gcagctttcg tttgcaccgt aacggttggt ccgcgggtca cctttaagggt 420
 ttgtccgacg cttaagctgt aaggttcggc catattatcc aacgcgcgca attctttcac 480
 atccaaacca gaaatgtagg cgataaggaa catggtgtca cctttgcgta cggtatangt 540

```

ttcacctttg tagaaacctt tgttgatttg gctgtaatcc ggtgcgtag tggtcggggt 600
acctggaatg gtgaaatctt gggatgcctg ttgcgggtga attttccccg gcagggttggg 660
tttgcttaac ccggttgtgc tttgcaatgc aaactgttga tacatcgggt gaaaaatcgg 720
ctgcgaggta gattgtgcgc cggtcgcctg tagattgttc gactgggcaa tcggaccggt 780
catcgaagcg ggtacattgc cttgttgat ttgcggttcc catgtgctat tgccgccatc 840
ggttgaaccg tccaccggtt gcatgagtc cggggataag gtaccgtcgg cgttttccac 900
cggtgccggg gtattcgaag tacaggccgc taacacggca atgctgatc 949

```

<210> 9

<211> 277

<212> DNA

<213> Actinobacillus actinomycetemcomitans

<400> 9

```

agagaaaaaa ccggaagccg caccggcaga caaaccggcg gcagaagccc cggcaacaat 60
caaagtgggc gtgatggcag gaccggaaca ccaagtggct gaaatcgag cgaaagtggc 120
aaaagaaaaa tacaacttag acgtagaata cgttttattc atgactacgc cttgccaaac 180
actgcagtgt ctaaagggtg tttagacggt aacgcaatgc aacataaacc gtatttagac 240
aaagattccc aagcgaaagg attgaacaac ttagtga 277

```

<210> 10

<211> 259

<212> DNA

<213> Actinobacillus actinomycetemcomitans

<400> 10

```

gatcaaactg gtggcgcaag ggcagcgcgt agcaaattta cccgatattt tggcttatgc 60
gcgcgtcggc aacggcatgg tagggcgacg ccgtgggtta aaccaagcca aagcggaatg 120
gcgcttattt aagctaaaac accatcttgg cattcagggg tttttatccg ggctattcac 180
ttttgtcctg cgttccgggt ccagattatt gccgacatca ttactgaaaa acatctatca 240
aacottttta agaaaataa 259

```

<210> 11

<211> 459

<212> DNA

<213> Actinobacillus actinomycetemcomitans

<400> 11

```

gatcgcaaca agcgcagttt ctatatttcc gccgcccgcg gtgagatttt caatttaatc 60
gttgccaaac gtattgaact cagtctggcg cagcaggtct taaatggaga cgttttgcaa 120
ctgaacgggt cgcacagttg gtttgtggcg gacgcacggg aagatttgac gcaactgcaa 180
caacgcttgg cacaacggga tattttgctt accgcaccgc ttatcggcga agaggacaaa 240
agtgcggtgg attttgagaa tgaaattttt gtcgcgcacc aagccttggt ccatttgatg 300
cggcaagaac gcgtgaaagc cgcccgccgt ccgattttta tgaggcgca acagtttcaa 360
tggaattttg aaccgaacgg tttgcgcctt aaattttatt tgccggcagg cagttacgcc 420
acggcggttg tacgcgagct ggtgaatgtt gaaaactga 459

```

<210> 12

<211> 596

<212> DNA

<213> Actinobacillus actinomycetemcomitans

<220>

<221> misc_feature
 <222> (131)
 <223> N stands for any nucleotide.

<220>
 <221> misc_feature
 <222> (151)
 <223> N stands for any nucleotide.

<220>
 <221> misc_feature
 <222> (170)
 <223> N stands for any nucleotide.

<220>
 <221> misc_feature
 <222> (178)
 <223> N stands for any nucleotide.

<220>
 <221> misc_feature
 <222> (194)
 <223> N stands for any nucleotide.

<220>
 <221> misc_feature
 <222> (199)
 <223> N stands for any nucleotide.

<220>
 <221> misc_feature
 <222> (209)
 <223> N stands for any nucleotide.

<400> 12
 atgaatattt tattaagtaa cgatgacggc attcacgcgc cgggcattcg tgtgatggca 60
 gaacattgcg taagattgcc aatgtgacca tcgtcgcgcc ggacagcaac cgcaagcgcc 120
 gccttcagtt ncttaacctt ggtgaagccg ntgtattccg ttcatttggn aaagcggnga 180
 ttattgcgtc aacngcacnc ccggcggant gcgtgcatat tgccctgacg ggttttcttt 240
 ccgggcgcat cgatttggtg atttccggca tcaacgcggg ggcgaaacctg ggcgatgatg 300
 tgctatatcc cggcacgggc gcggcagcat ttgaaggggc tcatctgggc ttgccgtcta 360
 ttgcgggtatc gctcgatggg cgtcaacatt ttgaaacggc ggcgcgcggtg gtatgcgatt 420
 tgggtgccgaa attacacgcc caattattag gcaaacacga aattctgaat attaacgtgc 480
 ccgatgtgcc ttacgaagaa ctgaaaggca ttaaagtgtg ccatttgggc taccgttctt 540
 ccgcttctga agtgattaaa cagcaaagcc cgcgtggcga agacatgtat tggatc 596

<210> 13
 <211> 429
 <212> DNA
 <213> Actinobacillus actinomycetemcomitans

<400> 13
 gatctgccgt tggcgaaacc ttacgaaatg ctgatcctcg cgtccatcgt ggaaaaagaa 60
 accggcattg ctgcagaacg cccacaagtg gcgtcgggtat tcattaatcg gtaaaaagcc 120
 aaaatgaagc tgcaaaccga tccgaccgtc atttacggca tgggcgacga ctacaacggc 180
 aatattcgca aaaaagattt ggaaacgcc aacgcctata acacctatgt gattgacggc 240

ttgccgccga caccgattgc gatgccgagt gaagaggcgt tacaggcggt ggcacatccg 300
gcgcaaacgg cgttttatta ttctgtggca gacggcacgg ggggacacaa attcagtcgt 360
aatttaaacg aacataacaa agcgggtgcag caatatttgc gctggtaccg cgaacaaaac 420
ggaaaataa 429

<210> 14
<211> 162
<212> DNA
<213> Actinobacillus actinomycescomitans

<400> 14
atggtaggca aatttattgt cattgaaggc ttggaaggcg caggcaaaag caccgctcat 60
caatgcgttg tggatacgtt aaaaacgtta ggtgttggg aagtcatttc taccgcgcag 120
cggggcggca caccggttg cggaagct acgcatctc at 162

<210> 15
<211> 67
<212> PRT
<213> Actinobacillus actinomycescomitans

<400> 15
Glu Lys Lys Pro Glu Ala Ala Pro Ala Asp Lys Pro Ala Ala Glu Ala
1 5 10 15
Pro Ala Thr Ile Lys Val Gly Val Met Ala Gly Pro Glu His Gln Val
20 25 30
Ala Glu Ile Ala Ala Lys Val Ala Lys Glu Lys Tyr Asn Leu Asp Val
35 40 45
Glu Tyr Val Leu Phe Met Thr Thr Pro Cys Gln Thr Leu Gln Cys Leu
50 55 60
Lys Val Ile
65

<210> 16
<211> 85
<212> PRT
<213> Actinobacillus actinomycescomitans

<400> 16
Ile Lys Leu Val Ala Gln Gly Gln Arg Val Ala Asn Leu Pro Asp Ile
1 5 10 15
Leu Val Tyr Ala Arg Val Gly Asn Gly Met Val Gly Arg Arg Arg Gly
20 25 30
Leu Asn Gln Ala Lys Ala Glu Trp Arg Leu Phe Lys Leu Lys His His
35 40 45
Leu Gly Ile Gln Gly Phe Leu Ser Gly Leu Phe Thr Phe Val Leu Arg
50 55 60

Ser Gly Ala Arg Leu Leu Pro Thr Ser Leu Leu Lys Asn Ile Tyr Gln
65 70 75 80

Thr Phe Leu Arg Lys
85

<210> 17
<211> 152
<212> PRT
<213> Actinobacillus actinomycetemcomitans

<400> 17
Asp Arg Asn Lys Arg Ser Phe Tyr Ile Ser Ala Ala Arg Ser Glu Ile
1 5 10 15

Phe Asn Leu Ile Val Ala Lys Arg Ile Glu Leu Ser Leu Ala Gln Gln
20 25 30

Val Leu Asn Gly Asp Val Leu Gln Leu Asn Gly Ser His Ser Trp Phe
35 40 45

Val Ala Asp Ala Ser Glu Asp Leu Thr Gln Leu Gln Gln Arg Leu Ala
50 55 60

Gln Arg Asp Ile Leu Leu Thr Ala Pro Leu Ile Gly Glu Glu Asp Lys
65 70 75 80

Ser Ala Val Asp Phe Glu Asn Glu Ile Phe Val Ala His Gln Ala Leu
85 90 95

Phe His Leu Met Arg Gln Glu Arg Val Lys Ala Ala Arg Arg Pro Ile
100 105 110

Leu Met Gln Ala Gln Gln Phe Gln Trp Gln Phe Glu Pro Asn Gly Leu
115 120 125

Arg Leu Lys Phe Tyr Leu Pro Ala Gly Ser Tyr Ala Thr Ala Leu Val
130 135 140

Arg Glu Leu Val Asn Val Glu Asn
145 150

<210> 18
<211> 198
<212> PRT
<213> Actinobacillus actinomycetemcomitans

<220>
<221> UNSURE
<222> (43)
<223> Xaa stands for any amino acid.

<220>
<221> UNSURE
<222> (50)

<223> Xaa stands for any amino acid.

<220>

<221> UNSURE

<222> (59)

<223> Xaa stands for any amino acid.

<220>

<221> UNSURE

<222> (66)

<223> Xaa stands for any amino acid.

<220>

<221> UNSURE

<222> (69)

<223> Xaa stands for any amino acid.

<400> 18

Met Asn Ile Leu Leu Ser Asn Asp Asp Gly Ile His Ala Pro Gly Ile
1 5 10 15

Arg Val Met Arg Thr Leu Arg Lys Ile Ala Asn Val Thr Ile Val Ala
20 25 30

Pro Asp Ser Asn Arg Lys Arg Arg Leu Gln Xaa Leu Asn Leu Gly Glu
35 40 45

Ala Xaa Val Phe Arg Ser Phe Gly Lys Ala Xaa Ile Ile Ala Ser Thr
50 55 60

Ala Xaa Pro Ala Xaa Cys Val His Ile Ala Leu Thr Gly Phe Leu Ser
65 70 75 80

Gly Arg Ile Asp Leu Val Ile Ser Gly Ile Asn Ala Gly Ala Asn Leu
85 90 95

Gly Asp Asp Val Leu Tyr Ser Gly Thr Val Ala Ala Ala Phe Glu Gly
100 105 110

Arg His Leu Gly Leu Pro Ser Ile Ala Val Ser Leu Asp Gly Arg Gln
115 120 125

His Phe Glu Thr Ala Ala Arg Val Val Cys Asp Leu Val Pro Lys Leu
130 135 140

His Ala Gln Leu Leu Gly Lys His Glu Ile Leu Asn Ile Asn Val Pro
145 150 155 160

Asp Val Pro Tyr Glu Glu Leu Lys Gly Ile Lys Val Cys His Leu Gly
165 170 175

Tyr Arg Ser Ser Ala Ser Glu Val Ile Lys Gln Gln Ser Pro Arg Gly
180 185 190

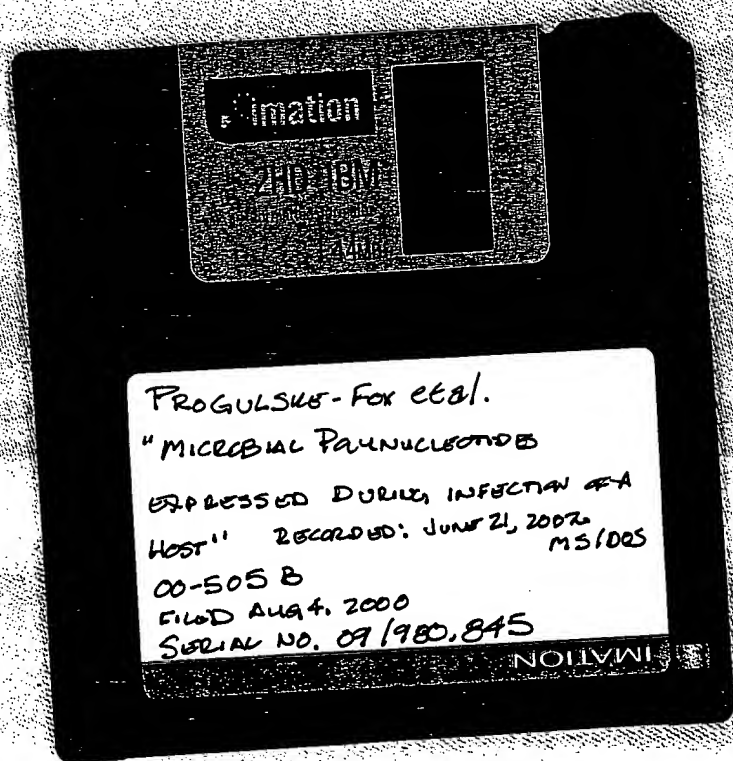
Glu Asp Met Tyr Trp Ile
195

<210> 19
 <211> 142
 <212> PRT
 <213> Actinobacillus actinomycetemcomitans

<400> 19
 Asp Leu Pro Leu Ala Asn Pro Tyr Glu Met Leu Ile Leu Ala Ser Ile
 1 5 10 15
 Val Glu Lys Glu Thr Gly Ile Ala Ala Glu Arg Pro Gln Val Ala Ser
 20 25 30
 Val Phe Ile Asn Arg Leu Lys Ala Lys Met Lys Leu Gln Thr Asp Pro
 35 40 45
 Thr Val Ile Tyr Gly Met Gly Asp Asp Tyr Asn Gly Asn Ile Arg Lys
 50 55 60
 Lys Asp Leu Glu Thr Pro Thr Pro Tyr Asn Thr Tyr Val Ile Asp Gly
 65 70 75 80
 Leu Pro Pro Thr Pro Ile Ala Met Pro Ser Glu Glu Ala Leu Gln Ala
 85 90 95
 Val Ala His Pro Ala Gln Thr Ala Phe Tyr Tyr Phe Val Ala Asp Gly
 100 105 110
 Thr Gly Gly His Lys Phe Ser Arg Asn Leu Asn Glu His Asn Lys Ala
 115 120 125
 Val Gln Gln Tyr Leu Arg Trp Tyr Arg Glu Gln Asn Gly Lys
 130 135 140

<210> 20
 <211> 54
 <212> PRT
 <213> Actinobacillus actinomycetemcomitans

<400> 20
 Met Val Gly Lys Phe Ile Val Ile Glu Gly Leu Glu Gly Ala Gly Lys
 1 5 10 15
 Ser Thr Ala His Gln Cys Val Val Asp Thr Leu Lys Thr Leu Gly Val
 20 25 30
 Gly Glu Val Ile Ser Thr Arg Glu Pro Gly Gly Thr Pro Val Gly Gly
 35 40 45
 Lys Ala Thr Pro Ser His
 50



PROGULSKY-FOX et al.
"MICROBIAL PANNUCLEONOSIS
EXPRESSED DURING INFECTION OF A
HOST" RECORDED: JUNE 21, 2002 MS/DQS
OO-SOS B
FILED AUG 4, 2000
SERIAL NO. 09/980,845

BEST AVAILABLE COPY

Hon. Commissioner of
Patents and Trademarks

S/N 09/980,845

Atty LMWH

Re: Applicant - Progulske-Fox

Case No. 00-505-B

Microbial Polynucleotides Expressed During Infection Of A Host

Sir:

Please place the Patent Office receipt stamp hereon and mail to acknowledge receipt of:

☒ Transmittal Letter

☒ Other Response to Notice of Defective Response; Sequence listing (computer readable copy and written copy)

Fee Enclosed

\$ -0-

June 24, 2002

Respectfully,
McDonnell Boehnen Hulbert & Berghoff
Attorney for Applicant

BEST AVAILABLE COPY



Hon. Commissioner of Patents and Trademarks
S/N 09/980,845
Atty LMWH
Re: Applicant - Proguiske-Fox
Case No. 00-505-B

Microbial Polynucleotides Expressed During Infection Of A Host

525 Rec'd PC 01 JUL 2002

Sir: Please place the Patent Office receipt stamp hereon and mail to acknowledge receipt of:

- ☒ Transmittal Letter
☒ Other Response to Notice of Defective Response: Sequence listing (computer readable copy and written copy)

Fee Enclosed

\$ -0-
June 24, 2002



Respectfully,
McDonnell Boehnen Hulbert & Berghoff
Attorney for Applicant

V



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
 Address: COMMISSIONER FOR PATENTS
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 www.uspto.gov

U.S. APPLICATION NUMBER NO.	FIRST NAMED APPLICANT	ATTY. DOCKET NO.
09/980,845	Ann Progulske-Fox	00-505-B

INTERNATIONAL APPLICATION NO.	
PCT/US00/21340	
I.A. FILING DATE	PRIORITY DATE
08/04/2000	08/06/1999

Lisa M.W. Hillman
 McDonnell Boehnen Hulbert & Berghoff
 300 S Wacker Drive Suite 3200
 Chicago, IL 60606

CONFIRMATION NO. 3701
371 FORMALITIES LETTER



OC000000008256428

Date Mailed: 01/03/2005

NOTIFICATION OF DEFECTIVE RESPONSE

The following items have been submitted by the applicant or the IB to the United States Patent and Trademark Office as a Designated / Elected Office (37 CFR 1.495)

- Indication of Small Entity Status
- Priority Document
- Copy of the International Application filed on 11/15/2001
- Copy of the International Search Report filed on 11/15/2001
- Copy of IPE Report filed on 04/08/2002
- Information Disclosure Statements filed on 04/08/2002
- Biochemical Sequence Diskette filed on 04/08/2002
- Oath or Declaration filed on 04/08/2002
- Biochemical Sequence Listing filed on 04/08/2002
- Small Entity Statement filed on 11/15/2001
- Request for Immediate Examination filed on 11/15/2001
- Copy of references cited in ISR filed on 11/15/2001
- U.S. Basic National Fees filed on 11/15/2001

DOCKETED

JAN 07 2005
 DUE DATE 2-3-05
 BY [Signature]

Applicant's response filed 04/08/2002 is hereby acknowledged. The following requirements set forth in the NOTIFICATION of MISSING REQUIREMENTS mailed 02/28/2002 have not been completed.

✓ Applicant is required to complete the response within a time limit of **ONE MONTH** from the date of this Notification or within the time remaining in the response set forth in the Notification of Missing Requirements, whichever is the longer. No extension of this time limit may be granted under 37 CFR 1.136, but the period for response set in the Notification of Missing Requirements may be extended under 37 CFR 1.136(a).

The following items **MUST** be furnished within the period set forth below in order to complete the requirements for acceptance under 35 U.S.C. 371:

The following items **MUST** be furnished within the period set forth below:

- The nucleotide and/or amino acid sequence disclosure contained in this application does not comply with the requirements for such a disclosure as set forth in 37 CFR 1.821-1.825 for the following reason(s):
 - A copy of the "Sequence Listing" in computer readable form has been submitted. The content of the computer readable form, however, does not comply with the requirements of Annex C of the Administrative Instructions and 37 CFR 1.822 and/or 1.832, as indicated on the attached marked-up copy of the "Raw Sequence Listing."
 - The computer readable form that has been filed with this application has been found to be damaged and/or unreadable as indicated on the attached CRF Diskette Problem Report. A substitute computer readable form must be submitted as required by 37 CFR 1.825(d).
 - APPLICANT MUST PROVIDE:
 - An initial or substitute computer readable form (CRF) of the "Sequence Listing."
 - An initial or substitute paper copy or compact disc of the "Sequence Listing," as well as an amendment directing its entry into the specification.
- For questions regarding compliance to 37 CFR 1.821-1.825 requirements, please contact:
 - For Rules Interpretation, call (703) 308-4216
 - To Purchase PatentIn Software, call (703) 306-2600
 - For PatentIn Software Program Help, call (703) 306-4119 or e-mail at patin21help@uspto.gov or patin3help@uspto.gov

Applicant is reminded that any communications to the United States Patent and Trademark Office must be mailed to the address given in the heading and include the U.S. application no. shown above (37 CFR 1.5)

*A copy of this notice **MUST** be returned with the response.*

VONDA M WALLACE

Telephone: (703) 305-3736

PART 1 - ATTORNEY/APPLICANT COPY

U.S. APPLICATION NUMBER NO.	INTERNATIONAL APPLICATION NO.	ATTY. DOCKET NO.
09/980,845	PCT/US00/21340	00-505-B



McDonnell Boehnen Hulbert & Berghoff
Law Offices

URGENT

Fax transmittal

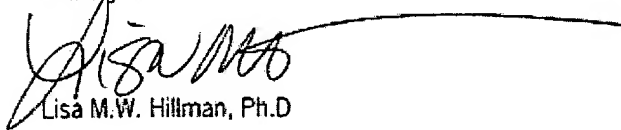
To Examiner Vonda M. Wallace
Company USPTO
Fax 703 746 6711
Phone
Pages, with cover 1
Re

Date January 24, 2005
From Lisa M.W. Hillman, Ph.D
Direct 312 935 2371
Email hillman@mbhb.com
C/M 665/ 6

Dear Examiner Wallace:

This paper is filed in response to the notice of defective response issued in the above-mentioned application on January 3, 2005. The notice states that the content of the computer readable form of the sequence listing does not comply with the sequence listing requirements and states that a marked-up copy of the raw sequence listing is attached to the notice. However, the marked-up copy of the raw sequence listing was not attached to the raw sequence listing. Applicants respectfully request that a copy of the marked-up sequence listing be sent to the undersigned at the Office's earliest convenience.

Thank you.


Lisa M.W. Hillman, Ph.D

300 South Wacker Drive 312 913 0001 phone
Chicago, Illinois 60606-6709 312 913 0002 fax
www.mbhb.com

Please notify receptionist at
312 913 0001 if all pages
are not received.
If you received this fax in error,
please notify us immediately by
phone (collect) to arrange for
return of the document.

This transmittal is strictly for
delivery only to the person listed
above. It may contain confidential
or privileged information, the
disclosure of which is prohibited.



McDonnell Boehnen Hulbert & Berghoff
Law Offices

URGENT

Fax transmittal

To Examiner Vonda M. Wallace
Company USPTO
Fax 703 746 6711
Phone
Pages, with cover 1
Re

Date January 24, 2005
From Lisa M.W. Hillman, Ph.D
Direct 312 935 2371
Email hillman@mbhb.com
C/M 665/ 6

Dear Examiner Wallace:

This paper is filed in response to the notice of defective response issued in the above-mentioned application on January 3, 2005. The notice states that the content of the computer readable form of the sequence listing does not comply with the sequence listing requirements and states that a marked-up copy of the raw sequence listing is attached to the notice. However, the marked-up copy of the raw sequence listing was not attached to the raw sequence listing. Applicants respectfully request that a copy of the marked-up sequence listing be sent to the undersigned at the Office's earliest convenience.

Thank you.


Lisa M.W. Hillman, Ph.D

300 South Wacker Drive 312 913 0001 phone
Chicago, Illinois 60606-6709 312 913 0002 fax
www.mbhb.com

Please notify receptionist at
312 913 0001 if all pages
are not received.
If you received this fax in error,
please notify us immediately by
phone (collect) to arrange for
return of the document.

This transmittal is strictly for
delivery only to the person listed
above. It may contain confidential
or privileged information, the
disclosure of which is prohibited.

*** SEND SUCCESSFUL ***

Job:369

Pages sent

: 01

End time

: JAN-24 12:59

Start time

: JAN-24 12:58

Doc. pages

: 01

To

: 817037466711

Date

: JAN-24 12:58

Job

: 369

Name : MCDONNELL BOEHNEN HULBERT & BERGHOFF
Fax number : +3129130002
Time : JAN-24-05 12:59

CONFIRMATION REPORT - MEMORY SEND



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
(Case No. 00-505-B)

In re Application of:

Progulske-Fox

Serial No.: 09/980,845

Filed: August 4, 2000

For: Microbial Polynucleotides Expressed
During Infection of a Host

Examiner: To Be Assigned

Group Art Unit: To Be Assigned

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL LETTER

1. We are transmitting herewith the attached papers for the above-identified patent application:

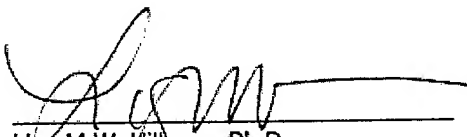
- ☒ Transmittal letter (in duplicate);
- ☒ Response to Notice of Defective Response;
- ☒ Copy of Notification of Defective Response;
- ☒ Paper copy of sequence listing;
- ☒ Diskette of sequence listing;
- ☒ Return Receipt Postcard

2. **GENERAL AUTHORIZATION TO CHARGE OR CREDIT FEES:** Please charge any additional fees or credit overpayment to Deposit Account No. 13-2490. A duplicate copy of this sheet is enclosed.

3. **CERTIFICATE OF MAILING UNDER 37 CFR §1.8:** The undersigned hereby certifies that this Transmittal Letter and the paper described in paragraph 1, are being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on February 3, 2005.

Dated: February 3, 2005

By:


Lisa M.W. Hillman, Ph.D
Reg. No. 43,673



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of)	
Progulske-Fox	)	Group Art Unit: TBA
)	
Serial No. 09/980,845	)	Examiner: TBA
)	
International Filing Date: Aug. 4, 2000	)	Atty. Dckt. No.: 00-505-B
)	
Priority Date: Aug. 6, 1999	)	Intl. Appl. No.: PCT/US00/21340

For: **MICROBIAL POLYNUCLEOTIDES EXPRESSED DURING INFECTION OF A HOST**

RESPONSE TO NOTICE OF DEFECTIVE RESPONSE

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

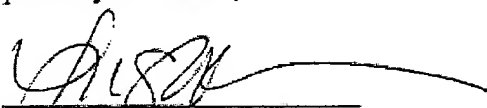
This paper is filed in response to the Notification of Defective Response mailed on January 3, 2005, in the above-mentioned case. It is believed that no fee is due in connection with this filing; however, if a fee is due please charge our deposit account number 13-2490.

The Notification of Defective Response stated that the computer readable copy was unreadable and also stated that errors found in the sequence listing were attached to the Notice. However, there was no attachment to the Notice. Applicants requested the attachment from Examiner Vonda Wallace on January 24, 2005 via phone and facsimile. However, the attachment to the Notice has not been received by Applicants. Applicants respectfully request that any errors in the sequence listing be brought to their attention at the Office's earliest convenience.

Enclosed is a written copy and a computer-readable copy of the sequence listing in the above mentioned case. The information recorded in computer readable form is identical to the written sequence listing. No new matter is added by the sequence listing. Applicants respectfully request that the specification of the application be amended by deleting the previously filed sequence listing and the entry of the enclosed sequence listing.

Respectfully submitted,

Date: 2/3/05

By: 
Lisa M.W. Hillman
Reg. No. 43,673

MCDONNELL, BOEHNEN,
HULBERT & BERGHOFF
300 South Wacker Drive
Chicago, IL 60606
(312) 913-0001



SEQUENCE LISTING

Handfield, Martin
Brady, Jeannine
Progulske-Fox, Ann
Hillman, Jeffrey D.

<120> Microbial Polynucleotides Expressed During Infection of
a Host

<130> MBHB00-505B

<140>

<141>

<150> 60/147,551

<151> 1999-08-06

<150> PCT/US00/21340

<151> 2000-08-04

<160> 20

<170> PatentIn Ver. 2.1

<210> 1

<211> 849

<212> DNA

<213> Actinobacillus actinomycetemcomitans

<220>

<221> misc_feature

<222> (566)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (625)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (627)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (636)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (650)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (656)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (661)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (672)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (681)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (720)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (723)
<223> N stands for any nucleotide.

<400> 1
gatcgcgtaa acggtgtaac acggaaagca attgtttaat gtcggcaaaa tgcagccctg 60
tggtcgggtc gtccagaata tacagggttt tgcccgtatc ccgtttggag agttccgtcg 120
ccagtttcac ccgttgcgct tccccgccgg acagggtggt agaggattgc cccaagcgaa 180
tataagacaa gccacgtca atcagggttt gcaatttacg cgcaatcatt ggaatggcat 240
cgaaaaactc gcgcgcatct tccaccgtca tgtccagcac ctgatgaatg gttttacctt 300
tgtagcggat ttccagggtt tcgcgattgt aacgcttgcc ttacattgg tcgcaaggca 360
cgtacacatc gggcaggaag tgcatttcca ctttgattac gccgtcgccc tggcaggctt 420
acagcgcccc ccgcgcacgt taaaactgaa acgccccggg ttataaccgc gcgcacgggc 480
tttcggtagc ccggcaaaca attcgcgaat cggcgtgaat acgcccgtgt aagttgcccg 540
gttgagcgt ggcgtgcgtc caatcnggct ttggttaata tcaatacttt atcgaaaaat 600
tccaaacctt taatggactt gtacngngaa acctcngcat tttctgcacn attaangcgt 660
nttgtgcaat anggaacaaa ntgtcgttaa tcagtgtaga atttacctta accggacacn 720
ccngtgatgc aggtaaataa gccacggga atgtctaaat tgacgttttt caggttgtta 780
ccggaagcgc cgaacaattt gagcattttt ttcttatcaa gtgcggtacg ttttttcggt 840
atttcgatc 849

<210> 2
<211> 357
<212> DNA
<213> Actinobacillus actinomycetemcomitans

<400> 2
gatcactaag ttgttcaatc ctttcgcttg ggaatctttg tctaaatacg gtttatgttg 60
cattgcgtta acgtctaaat cacctttaga cactgcagtg tttggcaagg cgtagtcatg 120
aataaaacgt attctacgtc taagttgtat ttttcttttg ccactttcgc tgcgatttca 180
gccacttggt gttccgggtc tgccatcacg cccactttga ttgttgccgg ggcttctgcc 240
gccggtttgt ctgccgggtg ggcttccggt tttttctctt cattacaagc ccgttaaggc 300

gaatacggag gctaagtgtg cgacgcctaa taattttttt caagttcata aaagatc 357

<210> 3
<211> 886
<212> DNA
<213> Actinobacillus actinomycetemcomitans

<220>
<221> misc_feature
<222> (554)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (596)
<223> N stands for any nucleotide.

<400> 3
gatcaaaactg gtggcgcaag ggcagcgcgt agcaaattta cccgatattt tgggtctatgc 60
gcgcgtcggc aacggcatgg tagggcgacg ccgtgggtta aaccaagcca aagcggaatg 120
gcgcttattt aagctaaaac accatcttgg cattcagggg tttttatccg ggctattcac 180
ttttgtcctg cgttcgggtg ccagattatt gccgacatca ttactgaaaa acatctatca 240
aaccttttta agaaaataac atgatgaaat taaactgtat tttaaaaata tccggaattt 300
ccaccgcact ttttctagcg ggttggttct caaattcaag tgcgccgacg caatcctctg 360
agcaggcgaa ttctgttacg gctgtgaatc ccactgcggt gtacagtaag ccccgcaactt 420
tggaataact caacgattat gtgaatttct taaaaggtaa agcagcggca gaaggcggtt 480
ctgccgacgt attgaatgca caaaataata ttaattatat tcaaaaatcc gtggatttgg 540
acgatcaaca agcnggcaga attcgcaagc gtgatccaaa tgccccgccg atcatnaatt 600
ccgaacggca cgaccaatta cttaaactcg gtattaacca agaataaagt agacacggca 660
gaagcacgtt attgggaaca attgccgcag cttgaaaatg cttcaaagaa attcagcgta 720
ccgaaaaatt atctgttagc cttgtggggc atggagagta gctttggcta ttatcagggc 780
aattacgatg tggtatccac cttagccact cttgcttttg acggacgccg tgaagcctta 840
ttcagcaaag aattcatcgc cgccatgaaa atgctacagc gcgatc 886

<210> 4
<211> 507
<212> DNA
<213> Actinobacillus actinomycetemcomitans

<220>
<221> misc_feature
<222> (4)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (9)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (21)
<223> N stands for any nucleotide.

<220>

<221> misc_feature
<222> (23)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (29)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (32)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (35)..(36)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (39)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (42)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (45)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (49)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (52)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (58)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (61)..(62)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (65)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (69)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (73)

<223> N stands for any polynucleotide.

<220>

<221> misc_feature

<222> (97)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (102)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (138)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (457)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (459)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (467)

<223> N stands for any nucleotide.

<400> 4

ttgntacct	agccgctgac	nanaactanc	angcnntgna	tnatntcgna	tnattaanat	60
nngcnaggng	cancagctta	cctttgccga	cggttcnctg	tntgaaagcg	ccattcgcaa	120
agtgccggtg	gaggcgngga	aaattcactc	acttggtgcg	gaaggcaatg	atgtgggatt	180
gaaagcccat	catggcgggg	ggataaagcg	ttatTTTTTA	tgtcggcaga	tgccTTTcct	240
gcgttaaagt	cgttattaga	cgaaaatttt	tcgtatcagg	acacagcagt	ttacggcgag	300
aattttgtgg	ttccgcgct	gaatgaagat	tccgtgtgtg	tgggcgatat	ttatcaaatt	360
ggctcctgcg	tggtggaggt	gtcgcagccg	cgtaaaccct	gtgagcgctt	atcgaaaaat	420
accaataatc	cgaacacgca	acaaaccgtg	tacgctnong	ctggtcnngc	tggtatgtgc	480
cggtggtacc	ccaaggggga	aattcaa				507

<210> 5

<211> 1087

<212> DNA

<213> Actinobacillus actinomycetemcomitans

<220>

<221> misc_feature

<222> (622)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (642)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (661)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (669)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (685)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (690)

<223> N stands for any nucleotide.

<220>

<221> misc_feature

<222> (700)

<223> N stands for any nucleotide.

<400> 5

```
gatcgcaaca agcgcagttt ctatatattcc gccgcccgcga gtgagatttt caattttaatc 60
gttgccaaac gtattgaact cagtctggcg cagcaggtct taaatggaga cgttttgcaa 120
ctgaacggtt cgcacagttg gtttgtggcg gacgcatcgg aagatttgac gcaactgcaa 180
caacgcttgg cacaacggga tattttgctt accgcaccgc ttatcggcga agaggacaaa 240
agtgcggtgg attttgagaa tgaaattttt gtcgcgcacc aagccttggt ccatttgatg 300
cggcaagaac gcgtgaaagc cgcccgcggt ccgattttta tgcaggcgca acagtttcaa 360
tggcaatttg aaccgaacgg tttgcgcctt aaattttatt tgccggcagg cagttacgcc 420
acggcggttg tacgcgagct ggtgaatggt gaaaactgaa aaacgagaag aaaaacagga 480
ataacaagaa catgaatatt ttattaagta acgatgacgg cattcacgcg ccgggcattc 540
gtgtgatggc agaacattgc gtaagattgc caatgtgacc atcgtcgcgc cggacagcaa 600
ccgcaagcgc cgccttcagt tncttaacct tgggtgaagcc gntgtattcc gttcatttg 660
naaagcggng attattgcgt caacngcaen cccggcggan tgcgatgata ttgccctgac 720
gggttttctt tccgggcgca tcgatttggt gatttcgggc atcaacgccg gggcgaaact 780
gggcgatgat gtgctatatt ccggcacggt cgcggcagca tttgaagggc gtcattctgg 840
cttgccgtct attgcggtat cgctcgatgg tcgtcaacat tttgaaacgg cggcgcgcg 900
ggtatgcgat ttggtgccga aattacacgc ccaattatta ggcaaacacg aaattctgaa 960
tattaacgtg cccgatgtgc cttacgaaga actgaaaggc attaaagtgt gccatttggg 1020
ctaccgttct tccgcttctg aagtgattaa acagcaaagc ccgcgtggcg aagacatgta 1080
ttggatc 1087
```

<210> 6
<211> 681
<212> DNA
<213> Actinobacillus actinomycetemcomitans

<220>
<221> misc_feature
<222> (609)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (614)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (651)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (665)
<223> N stands for any nucleotide.

<400> 6
gatctgccgt tggcgaaccc ttacgaaatg ctgatacctcg cgtccatcgt ggaaaaagaa 60
accggcattg ctgcagaacg cccacaagtg gcgtcggtat tcattaatcg gttaaaagcc 120
aaaatgaagc tgcaaaccga tccgaccgtc atttacggca tgggcgacga ctacaacggc 180
aatattcgca aaaaagattt ggaaacgcc aacgccttata acacctatgt gattgacggc 240
ttgccgccga caccgattgc gatgccgagt gaagaggcgt tacaggcggg ggcacatccg 300
gcgcaaacgg cgtttttatta tttcgtggca gacggcacgg ggggacacaa attcagtcgt 360
aatttaaacg aacataacaa agcgggtgcag caatatttgc gctggtaccg cgaacaaaac 420
ggaaaataat atggtaggca aatttattgt cattgaaggc ttggaaggcg caggcaaaag 480
caccgctcat caatgcgttg tggatacgtt aaaaacgtta ggtggtggg aagtcattctc 540
taccgcgcag cggggcgga caccggttg cggaaaagct acgccatctc attaaacatg 600
aaaaccaana gccngtgacc cgataaagcg gaattactca tgctgtatgc ngccgcctgc 660
aattngtggg aaaatgtgat c 681

<210> 7
<211> 822
<212> DNA
<213> Actinobacillus actinomycetemcomitans

<220>
<221> misc_feature
<222> (532)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (630)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (696)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (710)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (722)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (725)
<223> N stands for any nucleotide.

<400> 7
gatcgataaa aatcagcaag gcaaccactc ttaacaagaa ttgccatacc gtccaatatc 60
gtcgccaata ctgaatcgcg tagagcatgg ctaacgcaat catagcgcggt aaagtcggaa 120
tagcaagccc cgccagttgg ctgtataaca acgcaaaaat gaatccgcac agaatcggaa 180
atgtcgggct gatgtaacgc gtcggcaagg caaattgcag tagacgcgcc aaggtaaaac 240
ccagcatcat cgccagtcgc atatgcagcc ctgaaatggc aattaaatgc gccgtatttg 300
ttttttgata aatttgccaa gttttttggt ctaagcggaa acgttcgcca aaaccgagtg 360
ccagcaacaa gccttgctcg ggtaaattct ccgtttgttg taaggcttga ttgagagcgg 420
tttggcgtaa cgaaaaaacg ttttccaatt tgaccgcact tttaatctct gcccaagcgg 480
tgatgtgctt gccgaaatac catggctggc ggtcaaaacc gtcaaaattc angcgggaag 540
aaagcgctcg caagcgtaaa ttgcctgcgt aacgttcgcc cgggggttgac tggttgcttg 600
agtttccatt gcgcgtaaat acgttggtcn gggaagattt tcggcggaagt tttggcgccg 660
aataaccagc gggttggata atgctgctga tgccanaaat ttccttgacn ggtaaatttc 720
cngngngaac gggttttcgg cggcagattg gcaagattat ccgcctgggt cagtatggaa 780
attgccgatt ggtggacgta agcggactga atcatcaaga tc 822

<210> 8
<211> 949
<212> DNA
<213> Actinobacillus actinomycetemcomitans

<220>
<221> misc_feature
<222> (538)
<223> N stands for any nucleotide.

<400> 8
gatcagggttg ccgtaaccgc gtaaggcggtt acccgcgtaa accactcgac ctgcggcgcc 60
ggcattgact gcttgtctgc gagaaccact gatgtcgatg cctttgttac cgccgtcggc 120
gttagagaaa ccttgaatca cattgccgtt ggtcggccag cgccatgcc a cgttgatac 180
tgccgggtgcg gtgcccgctt gggttatcgg ctgattgggt gccgggtgcag cagtacctac 240
gccggcttta atcggggccg taatcgtgcc gtcggaacca tattgtgtgc cgtttgcgcc 300
cgggggtgtaa gttacggctg gttcaccacc ttgcgtagcc ggttgggtga ccgtcggttg 360
catttgcggt gcagctttcg tttgcaccgt aacggttggt ccgcggctca cctttaagggt 420
ttgtccgacg cttaagctgt aaggttcgga catattatc aacgcgcga attctttcac 480
atccaaacca gaaatgtagg cgataaggaa catggtgtca cctttgcgta cggatatangt 540

```

ttcacctttg tagaaacctt tgttgatttg gctgtaatcc ggtgcggttag tggtcggggt 600
acctggaatg gtgaaatctt gggatgcctg ttgcgggtga attttccccg gcaggttggg 660
tttgcttaac ccggttggtg tttgcaatgc aaactggtga tacatcggtt gaaaaatcgg 720
ctgcggagta gattgtgcgc cggtcgcctg tagattgttc gactgggcaa tcggaccgtt 780
catcgaagcg ggtacattgc cttgttggtt ttgcggttcc catgtgctat tgccgccatc 840
ggttgaaccg tccaccgggt gcatgagtcc cggggataag gtaccgtcgg cgttttccac 900
cggtgccggt gtattcgaag tacaggccgc taacacggca atgctgatc 949

```

<210> 9

<211> 277

<212> DNA

<213> *Actinobacillus actinomycetemcomitans*

<400> 9

```

agagaaaaaa ccggaagccg caccggcaga caaacggcg gcagaagccc cggcaacaat 60
caaagtgggc gtgatggcag gaccggaaca ccaagtggct gaaatcgag cgaaagtggc 120
aaaagaaaaa tacaacttag acgtagaata cgttttattc atgactacgc cttgccaaac 180
actgcagtgt ctaaagggtg tttagacgtt aacgcaatgc aacataaacc gtatttagac 240
aaagattccc aagcgaaagg attgaacaac ttagtga 277

```

<210> 10

<211> 259

<212> DNA

<213> *Actinobacillus actinomycetemcomitans*

<400> 10

```

gatcaaaactg gtggcgcaag ggcagcgct agcaaattta cccgatattt tggcttatgc 60
gcgcgtcggc aacggcatgg tagggcgacg ccgtggttta aaccaagcca aagcggaatg 120
gcgcttattt aagctaaaac accatcttgg cattcaggga tttttatccg ggctattcac 180
ttttgtcctg cgttcgggtg ccagattatt gccgacatca ttactgaaaa acatctatca 240
aaccttttta agaaaataa 259

```

<210> 11

<211> 459

<212> DNA

<213> *Actinobacillus actinomycetemcomitans*

<400> 11

```

gatcgcaaca agcgcagttt ctatatctcc gccgcccga gtgagatttt caatttaatc 60
gttgccaaac gtattgaact cagtctggcg cagcaggtct taaatggaga cgttttgcaa 120
ctgaacgggt cgcacagttg gtttgtggcg gacgcacgag aagatttgac gcaactgcaa 180
caacgcttgg cacaacggga tattttgctt accgcaccgc ttatcggcga agaggacaaa 240
agtgcggtgg attttgagaa tgaaattttt gtcgcgcacc aagccttggt ccatttgatg 300
cggcaagaac gcgtgaaagc cgcccgcgt ccgattttta tgacggcgca acagtttcaa 360
tggaattttg aaccgaacgg tttgcgcctt aaattttatt tgccggcagg cagttacgcc 420
acggcgttgg tacgcgagct ggtgaatggt gaaaactga 459

```

<210> 12

<211> 596

<212> DNA

<213> *Actinobacillus actinomycetemcomitans*

<220>

<221> misc_feature
<222> (131)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (151)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (170)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (178)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (194)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (199)
<223> N stands for any nucleotide.

<220>
<221> misc_feature
<222> (209)
<223> N stands for any nucleotide.

<400> 12
atgaatatattt tattaagtaa cgatgacggc attcacggcg cgggcattcg tgtgatggca 60
gaacattgcg taagattgcc aatgtgacca tcgtcgcgcc ggacagcaac cgcaagcgcc 120
gccttcagtt ncttaacctt ggtgaagccg ntgtattccg ttcatttggn aaagcgngga 180
ttattgcgtc aacngcacnc ccggcggant gcgtgcatat tgccctgacg gggttttcttt 240
ccgggcgcat cgatttggtg atttcggca tcaacgccgg ggcgaaacctg ggcgatgatg 300
tgctatatcc cggcacggtc gcggcagcat ttgaagggcg tcatctgggc ttgccgtcta 360
ttgcggtatc gtcgatggc cgtcaacatt ttgaaacggc ggcgcgcgtg gtatgcgatt 420
tggtgccgaa attacacgcc caattattag gcaaacacga aattctgaat attaacgtgc 480
ccgatgtgcc ttacgaagaa ctgaaaggca ttaaagtgtg ccatttgggc taccgttctt 540
ccgcttctga agtgattaaa cagcaaaggc cgcgtggcga agacatgtat tggatc 596

<210> 13
<211> 429
<212> DNA
<213> Actinobacillus actinomycetemcomitans

<400> 13
gatctgccgt tggcgaaccc ttacgaaatg ctgatcctcg cgtccatcgt ggaaaaagaa 60
accggcattg ctgcagaacg ccacaaagtg gcgtcggtat tcattaatcg gttaaaagcc 120
aaaatgaagc tgcaaaccga tccgaccgtc atttacggca tgggcgacga ctacaacggc 180
aatattcgca aaaaagattt ggaaacgcc aacgccttata acacctatgt gattgacggc 240

ttgccgccga caccgattgc gatgccgagt gaagaggcgt tacaggcgggt ggcacatccg 300
 gcgcaaacgg cgttttatta tttcgtggca gacggcacgg ggggacacaa attcagtcgt 360
 aatttaaacg aacataacaa agcgggtgcag caatatttgc gctgggtaccg cgaacaaaac 420
 ggaaaataa 429

<210> 14

<211> 162

<212> DNA

<213> Actinobacillus actinomycetemcomitans

<400> 14

atggtaggca aatttattgt cattgaaggc ttggaaggcg caggcaaaaag caccgctcat 60
 caatgcgttg tggatacggt aaaaacgtta ggtgttggg aagtcattct taccgcgag 120
 ccgggcggca caccggttg cgaaaagct acgcatctc at 162

<210> 15

<211> 67

<212> PRT

<213> Actinobacillus actinomycetemcomitans

<400> 15

Glu Lys Lys Pro Glu Ala Ala Pro Ala Asp Lys Pro Ala Ala Glu Ala
 1 5 10 15

Pro Ala Thr Ile Lys Val Gly Val Met Ala Gly Pro Glu His Gln Val
 20 25 30

Ala Glu Ile Ala Ala Lys Val Ala Lys Glu Lys Tyr Asn Leu Asp Val
 35 40 45

Glu Tyr Val Leu Phe Met Thr Thr Pro Cys Gln Thr Leu Gln Cys Leu
 50 55 60

Lys Val Ile
 65

<210> 16

<211> 85

<212> PRT

<213> Actinobacillus actinomycetemcomitans

<400> 16

Ile Lys Leu Val Ala Gln Gly Gln Arg Val Ala Asn Leu Pro Asp Ile
 1 5 10 15

Leu Val Tyr Ala Arg Val Gly Asn Gly Met Val Gly Arg Arg Arg Gly
 20 25 30

Leu Asn Gln Ala Lys Ala Glu Trp Arg Leu Phe Lys Leu Lys His His
 35 40 45

Leu Gly Ile Gln Gly Phe Leu Ser Gly Leu Phe Thr Phe Val Leu Arg
 50 55 60

Ser Gly Ala Arg Leu Leu Pro Thr Ser Leu Leu Lys Asn Ile Tyr Gln
65 70 75 80

Thr Phe Leu Arg Lys
85

<210> 17

<211> 152

<212> PRT

<213> Actinobacillus actinomycetemcomitans

<400> 17

Asp Arg Asn Lys Arg Ser Phe Tyr Ile Ser Ala Ala Arg Ser Glu Ile
1 5 10 15

Phe Asn Leu Ile Val Ala Lys Arg Ile Glu Leu Ser Leu Ala Gln Gln
20 25 30

Val Leu Asn Gly Asp Val Leu Gln Leu Asn Gly Ser His Ser Trp Phe
35 40 45

Val Ala Asp Ala Ser Glu Asp Leu Thr Gln Leu Gln Gln Arg Leu Ala
50 55 60

Gln Arg Asp Ile Leu Leu Thr Ala Pro Leu Ile Gly Glu Glu Asp Lys
65 70 75 80

Ser Ala Val Asp Phe Glu Asn Glu Ile Phe Val Ala His Gln Ala Leu
85 90 95

Phe His Leu Met Arg Gln Glu Arg Val Lys Ala Ala Arg Arg Pro Ile
100 105 110

Leu Met Gln Ala Gln Gln Phe Gln Trp Gln Phe Glu Pro Asn Gly Leu
115 120 125

Arg Leu Lys Phe Tyr Leu Pro Ala Gly Ser Tyr Ala Thr Ala Leu Val
130 135 140

Arg Glu Leu Val Asn Val Glu Asn
145 150

<210> 18

<211> 198

<212> PRT

<213> Actinobacillus actinomycetemcomitans

<220>

<221> UNSURE

<222> (43)

<223> Xaa stands for any amino acid.

<220>

<221> UNSURE

<222> (50)

<223> Xaa stands for any amino acid.

<220>

<221> UNSURE

<222> (59)

<223> Xaa stands for any amino acid.

<220>

<221> UNSURE

<222> (66)

<223> Xaa stands for any amino acid.

<220>

<221> UNSURE

<222> (69)

<223> Xaa stands for any amino acid.

<400> 18

Met	Asn	Ile	Leu	Leu	Ser	Asn	Asp	Asp	Gly	Ile	His	Ala	Pro	Gly	Ile
1				5					10					15	

Arg	Val	Met	Arg	Thr	Leu	Arg	Lys	Ile	Ala	Asn	Val	Thr	Ile	Val	Ala
			20					25					30		

Pro	Asp	Ser	Asn	Arg	Lys	Arg	Arg	Leu	Gln	Xaa	Leu	Asn	Leu	Gly	Glu
		35					40					45			

Ala	Xaa	Val	Phe	Arg	Ser	Phe	Gly	Lys	Ala	Xaa	Ile	Ile	Ala	Ser	Thr
	50					55					60				

Ala	Xaa	Pro	Ala	Xaa	Cys	Val	His	Ile	Ala	Leu	Thr	Gly	Phe	Leu	Ser
65					70					75					80

Gly	Arg	Ile	Asp	Leu	Val	Ile	Ser	Gly	Ile	Asn	Ala	Gly	Ala	Asn	Leu
				85					90					95	

Gly	Asp	Asp	Val	Leu	Tyr	Ser	Gly	Thr	Val	Ala	Ala	Ala	Phe	Glu	Gly
			100					105					110		

Arg	His	Leu	Gly	Leu	Pro	Ser	Ile	Ala	Val	Ser	Leu	Asp	Gly	Arg	Gln
		115					120					125			

His	Phe	Glu	Thr	Ala	Ala	Arg	Val	Val	Cys	Asp	Leu	Val	Pro	Lys	Leu
	130					135					140				

His	Ala	Gln	Leu	Leu	Gly	Lys	His	Glu	Ile	Leu	Asn	Ile	Asn	Val	Pro
145					150					155					160

Asp	Val	Pro	Tyr	Glu	Glu	Leu	Lys	Gly	Ile	Lys	Val	Cys	His	Leu	Gly
				165					170					175	

Tyr	Arg	Ser	Ser	Ala	Ser	Glu	Val	Ile	Lys	Gln	Gln	Ser	Pro	Arg	Gly
			180					185					190		

Glu	Asp	Met	Tyr	Trp	Ile
		195			

<210> 19
<211> 142
<212> PRT
<213> Actinobacillus actinomycetemcomitans

<400> 19
Asp Leu Pro Leu Ala Asn Pro Tyr Glu Met Leu Ile Leu Ala Ser Ile
1 5 10 15
Val Glu Lys Glu Thr Gly Ile Ala Ala Glu Arg Pro Gln Val Ala Ser
20 25 30
Val Phe Ile Asn Arg Leu Lys Ala Lys Met Lys Leu Gln Thr Asp Pro
35 40 45
Thr Val Ile Tyr Gly Met Gly Asp Asp Tyr Asn Gly Asn Ile Arg Lys
50 - 55 60
Lys Asp Leu Glu Thr Pro Thr Pro Tyr Asn Thr Tyr Val Ile Asp Gly
65 70 75 80
Leu Pro Pro Thr Pro Ile Ala Met Pro Ser Glu Glu Ala Leu Gln Ala
85 90 95
Val Ala His Pro Ala Gln Thr Ala Phe Tyr Tyr Phe Val Ala Asp Gly
100 105 110
Thr Gly Gly His Lys Phe Ser Arg Asn Leu Asn Glu His Asn Lys Ala
115 120 125
Val Gln Gln Tyr Leu Arg Trp Tyr Arg Glu Gln Asn Gly Lys
130 135 140

<210> 20
<211> 54
<212> PRT
<213> Actinobacillus actinomycetemcomitans

<400> 20
Met Val Gly Lys Phe Ile Val Ile Glu Gly Leu Glu Gly Ala Gly Lys
1 5 10 15
Ser Thr Ala His Gln Cys Val Val Asp Thr Leu Lys Thr Leu Gly Val
20 25 30
Gly Glu Val Ile Ser Thr Arg Glu Pro Gly Gly Thr Pro Val Gly Gly
35 40 45
Lys Ala Thr Pro Ser His
50



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
 Address: COMMISSIONER FOR PATENTS
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 www.uspto.gov

U.S. APPLICATION NUMBER NO.	FIRST NAMED APPLICANT	ATTY. DOCKET NO.
09/980,845	Ann Progulske-Fox	00-505-B

Lisa M.W. Hillman
 McDonnell Boehnen Hulbert & Berghoff
 300 S Wacker Drive Suite 3200
 Chicago, IL 60606

INTERNATIONAL APPLICATION NO.	
PCT/US00/21340	
LA. FILING DATE	PRIORITY DATE
08/04/2000	08/06/1999

CONFIRMATION NO. 3701
 371 FORMALITIES LETTER



OC00000008256428

Date Mailed: 01/03/2005

NOTIFICATION OF DEFECTIVE RESPONSE

The following items have been submitted by the applicant or the IB to the United States Patent and Trademark Office as a Designated / Elected Office (37 CFR 1.495)

- Indication of Small Entity Status
- Priority Document
- Copy of the International Application filed on 11/15/2001
- Copy of the International Search Report filed on 11/15/2001
- Copy of IPE Report filed on 04/08/2002
- Information Disclosure Statements filed on 04/08/2002
- Biochemical Sequence Diskette filed on 04/08/2002
- Oath or Declaration filed on 04/08/2002
- Biochemical Sequence Listing filed on 04/08/2002
- Small Entity Statement filed on 11/15/2001
- Request for Immediate Examination filed on 11/15/2001
- Copy of references cited in ISR filed on 11/15/2001
- U.S. Basic National Fees filed on 11/15/2001

DOCKETED

JAN 07 2005
 DUE DATE 2-3-05
 BY [Signature]

Applicant's response filed 04/08/2002 is hereby acknowledged. The following requirements set forth in the NOTIFICATION of MISSING REQUIREMENTS mailed 02/28/2002 have not been completed.

✓ Applicant is required to complete the response within a time limit of ONE MONTH from the date of this Notification or within the time remaining in the response set forth in the Notification of Missing Requirements, whichever is the longer. No extension of this time limit may be granted under 37 CFR 1.136, but the period for response set in the Notification of Missing Requirements may be extended under 37 CFR 1.136(a).

The following items **MUST** be furnished within the period set forth below in order to complete the requirements for acceptance under 35 U.S.C. 371:

The following items **MUST** be furnished within the period set forth below:

- The nucleotide and/or amino acid sequence disclosure contained in this application does not comply with the requirements for such a disclosure as set forth in 37 CFR 1.821-1.825 for the following reason(s):
 - A copy of the "Sequence Listing" in computer readable form has been submitted. The content of the computer readable form, however, does not comply with the requirements of Annex C of the Administrative Instructions and 37 CFR 1.822 and/or 1.832, as indicated on the attached marked-up copy of the "Raw Sequence Listing."
 - The computer readable form that has been filed with this application has been found to be damaged and/or unreadable as indicated on the attached CRF Diskette Problem Report. A substitute computer readable form must be submitted as required by 37 CFR 1.825(d).
 - APPLICANT MUST PROVIDE:
 - An initial or substitute computer readable form (CRF) of the "Sequence Listing."
 - An initial or substitute paper copy or compact disc of the "Sequence Listing," as well as an amendment directing its entry into the specification.
- For questions regarding compliance to 37 CFR 1.821-1.825 requirements, please contact:
 - For Rules Interpretation, call (703) 308-4216
 - To Purchase PatentIn Software, call (703) 306-2600
 - For PatentIn Software Program Help, call (703) 306-4119 or e-mail at patin21help@uspto.gov or patin3help@uspto.gov

Applicant is reminded that any communications to the United States Patent and Trademark Office must be mailed to the address given in the heading and include the U.S. application no. shown above (37 CFR 1.5)

*A copy of this notice **MUST** be returned with the response.*

VONDA M WALLACE

Telephone: (703) 305-3736

PART 1 - ATTORNEY/APPLICANT COPY

U.S. APPLICATION NUMBER NO.	INTERNATIONAL APPLICATION NO.	ATTY. DOCKET NO.
09/980,845	PCT/US00/21340	00-505-B

STIC Biotechnology Systems Branch

RAW SEQUENCE LISTING **ERROR REPORT**

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/980,845A
Source: IFWP
Date Processed by STIC: 1/18/06

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE **CHECKER** **VERSION 4.4.0 PROGRAM**, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/ebc/efs/downloads/documents.htm>> , EFS Submission User Manual - cPAVE)
2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. Hand Carry, Federal Express, United Parcel Service, or other delivery service (EFFECTIVE 01/14/05):
U.S. Patent and Trademark Office, Mail Stop Sequence, Customer Window, Randolph Building, 401 Dulany Street, Alexandria, VA 22314

Revised 01/10/06



IFWP

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/980,845A

DATE: 01/18/2006

TIME: 15:36:00

Input Set : A:\seqlistcorrected.2002.06.21.txt

Output Set: N:\CRF4\01182006\I980845A.raw

3 <110> APPLICANT: Handfield, Martin
4 Brady, Jeannine
5 Progulske-Fox, Ann
6 Hillman, Jeffrey D.
8 <120> TITLE OF INVENTION: Microbial Polynucleotides Expressed During Infection of
9 a Host
11 <130> FILE REFERENCE: MBHB00-50SB
C--> 13 <140> CURRENT APPLICATION NUMBER: US/09/980,845A
C--> 14 <141> CURRENT FILING DATE: 2001-11-15
16 <150> PRIOR APPLICATION NUMBER: 60/147,551
17 <151> PRIOR FILING DATE: 1999-08-06
19 <150> PRIOR APPLICATION NUMBER: PCT/US00/21340
20 <151> PRIOR FILING DATE: 2000-08-04
22 <160> NUMBER OF SEQ ID NOS: 20
24 <170> SOFTWARE: PatentIn Ver. 2.1
26 <210> SEQ ID NO: 1
27 <211> LENGTH: 849
28 <212> TYPE: DNA
29 <213> ORGANISM: Actinobacillus actinomycetemcomitans
31 <220> FEATURE:
32 <221> NAME/KEY: misc_feature
33 <222> LOCATION: (566)
34 <223> OTHER INFORMATION: N stands for any nucleotide.
36 <220> FEATURE:
37 <221> NAME/KEY: misc_feature
38 <222> LOCATION: (625)
39 <223> OTHER INFORMATION: N stands for any nucleotide.
41 <220> FEATURE:
42 <221> NAME/KEY: misc_feature
43 <222> LOCATION: (627)
44 <223> OTHER INFORMATION: N stands for any nucleotide.
46 <220> FEATURE:
47 <221> NAME/KEY: misc_feature
48 <222> LOCATION: (636)
49 <223> OTHER INFORMATION: N stands for any nucleotide.
51 <220> FEATURE:
52 <221> NAME/KEY: misc_feature
53 <222> LOCATION: (650)
54 <223> OTHER INFORMATION: N stands for any nucleotide.
56 <220> FEATURE:
57 <221> NAME/KEY: misc_feature
58 <222> LOCATION: (656)
59 <223> OTHER INFORMATION: N stands for any nucleotide.

Does Not Comply
Corrected Diskette Needed

P.4

RAW SEQUENCE LISTING

DATE: 01/18/2006

PATENT APPLICATION: US/09/980,845A

TIME: 15:36:00

Input Set : A:\seqlistcorrected.2002.06.21.txt

Output Set: N:\CRF4\01182006\I980845A.raw

```
61 <220> FEATURE:
62 <221> NAME/KEY: misc_feature
63 <222> LOCATION: (661)
64 <223> OTHER INFORMATION: N stands for any nucleotide.
66 <220> FEATURE:
67 <221> NAME/KEY: misc_feature
68 <222> LOCATION: (672)
69 <223> OTHER INFORMATION: N stands for any nucleotide.
71 <220> FEATURE:
72 <221> NAME/KEY: misc_feature
73 <222> LOCATION: (681)
74 <223> OTHER INFORMATION: N stands for any nucleotide.
76 <220> FEATURE:
77 <221> NAME/KEY: misc_feature
78 <222> LOCATION: (720)
79 <223> OTHER INFORMATION: N stands for any nucleotide.
81 <220> FEATURE:
82 <221> NAME/KEY: misc_feature
83 <222> LOCATION: (723)
84 <223> OTHER INFORMATION: N stands for any nucleotide.
86 <400> SEQUENCE: 1
87 gatcgcgtaa acgggtgtaac acggaagca attgtttaat gtcggcaaaa tgcagccctg 60
88 tgggtcggttc gtccagaata tacagggttt tgcctgtatc cgtttggag agttccgtcg 120
89 ccagtttcac cgtttgcgtt tccccgccgg acagggtggt agaggattgc cccaagcgaa 180
90 tataagacaa gccacgtca atcagggttt gcaatttacg cgcaatcatt ggaatggcat 240
91 cgaaaaactc gcgcgcattt tccaccgtca tgtccagcac ctgatgaatg gttttacett 300
92 tgtagcggat ttcagggtt tcgcgattgt aacgcttgcc ttacattgg tcgcaaggca 360
93 cgtacacatc gggcagggaag tgcatttcca ctttgattac gccgtcgccc tggcaggctt 420
94 acagcgcccg ccgcgcacgt taaaactgaa acgccccggg ttataaccgc gcgcacgggc 480
95 tttcggtacg ccggcnaaca attcgcaat cggcgtgaat acgcccgtgt aagttgcccg 540
W--> 96 gttggagcgt ggcgtgcgtc caatcnggct ttgggttaata tcaatacttt atcgaaaaat 600
97 tccaaacctt taatggactt gtaengngaa acctcngcat tttctgcacn attaangcgt 660
98 nttgtgcaat anggaacaaa ntgtcgttaa tcagtgtaga atttacctta accggacacn 720
99 ccngtgatgc aggtanataa gcccacggga atgtctaaat tgacgttttt cagggttgta 780
100 ccggaagcgc cgaacaattt gagcattttt ttcttatcaa gtgoggtacg ttttttcggt 840
101 atttcgatc 849
104 <210> SEQ ID NO: 2
105 <211> LENGTH: 357
106 <212> TYPE: DNA
107 <213> ORGANISM: Actinobacillus actinomycetemcomitans
109 <400> SEQUENCE: 2
110 gatcactaag ttgttcaatc ctttcgcttg ggaatctttg tctaaatacg gtttatgttg 60
111 cattgcgtta acgtctaaat cacctttaga cactgcagtg tttggcaagg cgtagtcattg 120
112 aataaaacgt attctacgtc taagttgtat tttctttttg ccacttttcg tcgcatttca 180
113 gccacttggt gttccgggtc tgccatcacg cccactttga ttgttgccgg ggcttctgcc 240
114 gccggtttgt ctgcgggtgc ggccttcggg tttttctett cattacaagc ccgttaaggc 300
115 gaatacggag gctaattgtt cgacgcctaa taattttttt caagttcata aaagatc 357
118 <210> SEQ ID NO: 3
119 <211> LENGTH: 886
```

RAW SEQUENCE LISTING

DATE: 01/18/2006

PATENT APPLICATION: US/09/980,845A

TIME: 15:36:00

Input Set : A:\seqlistcorrected.2002.06.21.txt

Output Set: N:\CRF4\01182006\I980845A.raw

```
61 <220> FEATURE:
62 <221> NAME/KEY: misc_feature
63 <222> LOCATION: (661)
64 <223> OTHER INFORMATION: N stands for any nucleotide.
66 <220> FEATURE:
67 <221> NAME/KEY: misc_feature
68 <222> LOCATION: (672)
69 <223> OTHER INFORMATION: N stands for any nucleotide.
71 <220> FEATURE:
72 <221> NAME/KEY: misc_feature
73 <222> LOCATION: (681)
74 <223> OTHER INFORMATION: N stands for any nucleotide.
76 <220> FEATURE:
77 <221> NAME/KEY: misc_feature
78 <222> LOCATION: (720)
79 <223> OTHER INFORMATION: N stands for any nucleotide.
81 <220> FEATURE:
82 <221> NAME/KEY: misc_feature
83 <222> LOCATION: (723)
84 <223> OTHER INFORMATION: N stands for any nucleotide.
86 <400> SEQUENCE: 1
87 gatcgcgtaa acggtgtaac acggaagca attgtttaat gtcggcaaaa tgcagccctg 60
88 tggtcgggttc gtccagaata tacagggttt tgcccgatc ccgtttggag agttccgctg 120
89 ccagtttcac ccgttgcgct tcccgcgcg acagggtggt agaggattgc cccaagcgaa 180
90 tataagacaa gcccacgtca atcagggttt gcaatttac gcgaatcatt ggaatggcat 240
91 cgaaaaactc gcgcgcacat tccaccgtca gtccagcac ctgatgaatg gttttacctt 300
92 tgtagcggat ttccagggtt tcgcgattgt aacgcttgcc ttacattgg tcgcaaggca 360
93 cgtacacatc gggcaggaag tgcatttcca ctttgattac gccgtcgccc tggcaggctt 420
94 acagcgcccg ccgcgcacgt taaaactgaa acgccccggg ttataaccgc gcgcacgggc 480
95 tttcggtacg ccggcaaaaca attcgcgaaat cggcgtgaat acgcccgtgt aagttgcccg 540
W--> 96 gttggagcgt ggcgtgcgtc caatcnggct ttggttaata tcaatacttt atcgaaaaat 600
97 tccaaacctt taatggactt gtacnngaa acctcngcat tttctgcacn attaanccgt 660
98 nttgtgcaat anggaacaaa ntgtcgtaa tcagtgtaga atttacctta accggacacn 720
99 ccngtgatgc aggtaaataa gccacggga atgtctaaat tgacgttttt caggttggtt 780
100 ccggaagcgc cgaacaattt gagcattttt ttcttatcaa gtgcggtacg ttttttcggt 840
101 atttcgatc 849
104 <210> SEQ ID NO: 2
105 <211> LENGTH: 357
106 <212> TYPE: DNA
107 <213> ORGANISM: Actinobacillus actinomycetemcomitans
109 <400> SEQUENCE: 2
110 gatcactaag ttgttcatac ctttcgcttg ggaatctttg tctaaatacg gtttatgttg 60
111 cattgcgtta acgtctaaat cactttttaga cactgcagtg tttggcaagg cgtagtcatg 120
112 aataaaaacgt attotacgtc taagttgtat tttttctttg ccactttcgc tgcgatttca 180
113 gccacttggt gttccgggtc tgccatcacg cccactttga ttgttgccgg ggcttctgcc 240
114 gccggtttgt ctgcgggtgc ggcttcgggt tttttctctt cattacaagc ccgtaaggcc 300
115 gaatacggag gctaattgtg cgacgcctaa taattttttt caagttcata aaagatc 357
118 <210> SEQ ID NO: 3
119 <211> LENGTH: 886
```

RAW SEQUENCE LISTING

DATE: 01/18/2006

PATENT APPLICATION: US/09/980,845A

TIME: 15:36:00

Input Set : A:\seqlistcorrected.2002.06.21.txt

Output Set: N:\CRF4\01182006\I980845A.raw

120 <212> TYPE: DNA
121 <213> ORGANISM: Actinobacillus actinomycetemcomitans
123 <220> FEATURE:
124 <221> NAME/KEY: misc_feature
125 <222> LOCATION: (554)
126 <223> OTHER INFORMATION: N stands for any nucleotide.
128 <220> FEATURE:
129 <221> NAME/KEY: misc_feature
130 <222> LOCATION: (596)
131 <223> OTHER INFORMATION: N stands for any nucleotide.
133 <400> SEQUENCE: 3
134 gatcaaaactg gtggcgcaag ggcagcgcg agcaaatTTA cccgatattt tggTctatgc 60
135 gcgcgtcggc aacggcatgg tagggcgacg ccgtggTTta aaccaagcca aagcggaatg 120
136 gcgcttattt aagctaaaac accatcttgg cattcaggga tttttatccg ggctattcac 180
137 ttttgcctcg cgttccgggtg ccagattatt gcgcacatca ttactgaaaa acatctatca 240
138 aaccttttta agaaaataac atgatgaaat taaactgTat tttaaaaata tccggaattt 300
139 ccaccgcact tttctagcg ggttgTtccT caaattcaag tgcgcgcgacg caatcctctg 360
140 agcaggcgaa ttctgttacg gctgtgaatc ccactgcggT gtacagtaag ccccgcaact 420
141 tggataactt caacgattat gtgaatttct taaaaggTaa agcagcgggca gaaggcgTtt 480
142 ctgcgcagcg attgaatgca caaaataata ttaattatat tcaaaaatcc gtggatttgg 540
W--> 143 acgatacaaca agcnggcaga attcgcaagc gtgatccaaa tgccecgccg atcatnaatt 600
144 ccgaacggca cgaccaatta cttaaactcg gtattaaCCA agaataaagt agacacggca 660
145 gaagcacgTt attgggaaca attgcgcgag cttgaaaatg cttcanagaa attcagcgta 720
146 ccgaaaaatt atctgttagc cttgtggggc atggagagta gctttggcta ttatcagggc 780
147 aattacgatg tgttatccac cttagccact cttgcttttg acggaagcgg tgaagcctta 840
148 ttcagcaaaag aattcatcgc cgccatgaaa atgctacagc gcgatc 886
151 <210> SEQ ID NO: 4
152 <211> LENGTH: 507
153 <212> TYPE: DNA
154 <213> ORGANISM: Actinobacillus actinomycetemcomitans
156 <220> FEATURE:
157 <221> NAME/KEY: misc_feature
158 <222> LOCATION: (4)
159 <223> OTHER INFORMATION: N stands for any nucleotide.
161 <220> FEATURE:
162 <221> NAME/KEY: misc_feature
163 <222> LOCATION: (9)
164 <223> OTHER INFORMATION: N stands for any nucleotide.
166 <220> FEATURE:
167 <221> NAME/KEY: misc_feature
168 <222> LOCATION: (21)
169 <223> OTHER INFORMATION: N stands for any nucleotide.
171 <220> FEATURE:
172 <221> NAME/KEY: misc_feature
173 <222> LOCATION: (23)
174 <223> OTHER INFORMATION: N stands for any nucleotide.
176 <220> FEATURE:
177 <221> NAME/KEY: misc_feature
178 <222> LOCATION: (29)

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/980,845A

DATE: 01/18/2006

TIME: 15:36:00

Input Set : A:\seqlistcorrected.2002.06.21.txt

Output Set: H:\CRF4\01182006\I980845A.raw

179 <223> OTHER INFORMATION: N stands for any nucleotide.
 181 <220> FEATURE:
 182 <221> NAME/KEY: misc_feature
 183 <222> LOCATION: (32)
 184 <223> OTHER INFORMATION: N stands for any nucleotide.
 186 <220> FEATURE:
 187 <221> NAME/KEY: misc_feature
 188 <222> LOCATION: (35)..(36)
 189 <223> OTHER INFORMATION: N stands for any nucleotide.
 191 <220> FEATURE:
 192 <221> NAME/KEY: misc_feature
 193 <222> LOCATION: (39)
 194 <223> OTHER INFORMATION: N stands for any nucleotide.
 196 <220> FEATURE:
 197 <221> NAME/KEY: misc_feature
 198 <222> LOCATION: (42)
 199 <223> OTHER INFORMATION: N stands for any nucleotide.
 201 <220> FEATURE:
 202 <221> NAME/KEY: misc_feature
 203 <222> LOCATION: (45)
 204 <223> OTHER INFORMATION: N stands for any nucleotide.
 206 <220> FEATURE:
 207 <221> NAME/KEY: misc_feature
 208 <222> LOCATION: (49)
 209 <223> OTHER INFORMATION: N stands for any nucleotide.
 211 <220> FEATURE:
 212 <221> NAME/KEY: misc_feature
 213 <222> LOCATION: (52)
 214 <223> OTHER INFORMATION: N stands for any nucleotide.
 216 <220> FEATURE:
 217 <221> NAME/KEY: misc_feature
 218 <222> LOCATION: (58)
 219 <223> OTHER INFORMATION: N stands for any nucleotide.
 221 <220> FEATURE:
 222 <221> NAME/KEY: misc_feature
 223 <222> LOCATION: (61)..(62)
 224 <223> OTHER INFORMATION: N stands for any nucleotide.
 226 <220> FEATURE:
 227 <221> NAME/KEY: misc_feature
 228 <222> LOCATION: (65)
 229 <223> OTHER INFORMATION: N stands for any nucleotide.
 231 <220> FEATURE:
 232 <221> NAME/KEY: misc_feature
 233 <222> LOCATION: (69)
 234 <223> OTHER INFORMATION: N stands for any nucleotide.
 236 <220> FEATURE:
 237 <221> NAME/KEY: misc_feature
 238 <222> LOCATION: (73)
 239 <223> OTHER INFORMATION: N stands for any polynucleotide.

"N" can only
 represent a
 single
 nucleotide

RAW SEQUENCE LISTING

DATE: 01/18/2006

PATENT APPLICATION: US/09/980,845A

TIME: 15:36:00

Input Set : A:\seqlistcorrected.2002.06.21.txt

Output Set : N:\CRF4\01182006\I980845A.raw

241 <220> FEATURE:
242 <221> NAME/KEY: misc_feature
243 <222> LOCATION: (97)
244 <223> OTHER INFORMATION: N stands for any nucleotide.
246 <220> FEATURE:
247 <221> NAME/KEY: misc_feature
248 <222> LOCATION: (102)
249 <223> OTHER INFORMATION: N stands for any nucleotide.
251 <220> FEATURE:
252 <221> NAME/KEY: misc_feature
253 <222> LOCATION: (138)
254 <223> OTHER INFORMATION: N stands for any nucleotide.
256 <220> FEATURE:
257 <221> NAME/KEY: misc_feature
258 <222> LOCATION: (457)
259 <223> OTHER INFORMATION: N stands for any nucleotide.
261 <220> FEATURE:
262 <221> NAME/KEY: misc_feature
263 <222> LOCATION: (459)
264 <223> OTHER INFORMATION: N stands for any nucleotide.
266 <220> FEATURE:
267 <221> NAME/KEY: misc_feature
268 <222> LOCATION: (467)
269 <223> OTHER INFORMATION: N stands for any nucleotide.
271 <400> SEQUENCE: 4
W--> 272 ttgntacctt agcgcgtgac nanaactanc angcnntgna tnatntcgna tnattaanatt 60
273 nngcnaggng cancagctta cctttgccga cggttencgt tntgaaagcg ccattcgcaa 120
274 agtgccgggt gaggcggnga aaattcactc acttggtgcg gaaggcaatg atgtgggatt 180
275 gaaagcccat catggcgggt ggataaagcg ttatttttta tgcggcaga tgcctttcct 240
276 gcgttaaatg cgttattaga cgaataattt tgcgtacagg acacagcagt ttacggcgag 300
277 aattttgtgg ttccgcgct gaataagat tccgtgtgtg tgggcgatat ttatcaaatc 360
278 ggctcctgcg tgggtggagg gtgcgagccg cgtaaacctt gtgagcgctt atcgaaaaat 420
279 accaataatc cgaacacgca acaaaccgtg tacgctncng ctggctcnggc tggatatgtgc 480
280 cgggtgtacc ccaaggggga aattcaa 507
283 <210> SEQ ID NO: 5
284 <211> LENGTH: 1087
285 <212> TYPE: DNA
286 <213> ORGANISM: Actinobacillus actinomycetemcomitans
288 <220> FEATURE:
289 <221> NAME/KEY: misc_feature
290 <222> LOCATION: (622)
291 <223> OTHER INFORMATION: N stands for any nucleotide.
293 <220> FEATURE:
294 <221> NAME/KEY: misc_feature
295 <222> LOCATION: (642)
296 <223> OTHER INFORMATION: N stands for any nucleotide.
298 <220> FEATURE:
299 <221> NAME/KEY: misc_feature
300 <222> LOCATION: (661)

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 01/18/2006
PATENT APPLICATION: US/09/980,845A TIME: 15:36:01

Input Set : A:\seqlistcorrected.2002.06.21.txt
Output Set: N:\CRF4\01182005\I980845A.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; N Pos. 556, 625, 627, 636, 650, 656, 661, 672, 681, 720, 723
Seq#:3; N Pos. 554, 596
Seq#:4; N Pos. 4, 6, 21, 23, 29, 32, 35, 36, 39, 42, 45, 49, 52, 55, 61, 62, 65, 69, 73, 97
Seq#:4; N Pos. 102, 138, 457, 459, 467
Seq#:5; N Pos. 622, 642, 651, 669, 685, 690, 700
Seq#:6; N Pos. 609, 614, 651, 665
Seq#:7; N Pos. 532, 630, 696, 710, 722, 725
Seq#:8; N Pos. 538
Seq#:12; N Pos. 131, 151, 170, 178, 194, 199, 209
Seq#:18; Xaa Pos. 43, 50, 59, 66, 69

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/980,845A

DATE: 01/18/2006

TIME: 15:36:01

Input Set : A:\seqlistcorrected.2002.06.21.txt

Output Set: N:\CRF4\01182006\I980845A.raw

L:13 M:270 C: Current Application Number differs, Replaced Application Number
 L:14 M:271 C: Current Filing Date differs, Replaced Current Filing Date
 L:96 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:540
 M:341 Repeated in SeqNo=1
 L:143 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:540
 L:272 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:0
 M:341 Repeated in SeqNo=4
 L:334 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:600
 M:341 Repeated in SeqNo=5
 L:381 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6 after pos.:600
 M:341 Repeated in SeqNo=6
 L:429 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:480
 M:341 Repeated in SeqNo=7
 L:456 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:480
 L:551 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:120
 M:341 Repeated in SeqNo=12
 L:709 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 after pos.:32
 M:341 Repeated in SeqNo=18



DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

Microbial Polynucleotides Expressed During Infection of a Host

the specification of which is attached hereto unless the following space is checked:

☒ was filed on November 15, 2001 as United States Application Serial Number 09/980,845.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR § 1.56.

I hereby claim foreign priority benefits under 35 U.S.C. § 119(a)-(d) or § 365(b) of any foreign application(s) for patent or inventor's certificate, or § 365(a) of any PCT international application which designated at least one country other than the United States, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s):

	<u>Number</u>	<u>Country</u>	<u>Day/Month/Year Filed</u>
1.	US00/21340	PCT	August 4, 2000
2.			

I hereby claim the benefit under 35 U.S.C. § 119(e) of any United States provisional application(s) listed below:

	<u>Application Number</u>	<u>Filing Date</u>
1.	60/147,551	August 6, 1999
2.		

I hereby claim the benefit under 35 U.S.C. § 120 of any United States application(s), or § 365(c) of any PCT international application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT international application in the manner provided by the first paragraph of 35 U.S.C. § 112, I acknowledge the duty to disclose information which is material to patentability as defined in 37 C.F.R. § 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application.

	<u>Application Number</u>	<u>Filing Date</u>	<u>Status: patented, pending, abandoned</u>
1.			
2.			

I hereby appoint the practitioners associated with the Customer Number provided below to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith, and I direct that all correspondence be addressed to that Customer Number.

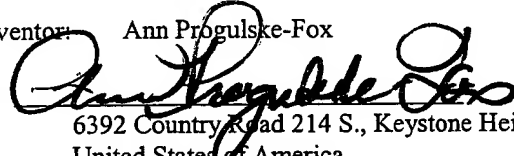
Customer Number: 020306

Principal attorney or agent: Lisa M.W. Hillman
Telephone number: 312-913-0001

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of first inventor: Ann Progulskie-Fox

Inventor's signature:



Date:

3/20/02

Residence:

6392 Country Road 214 S., Keystone Heights, Florida 32656

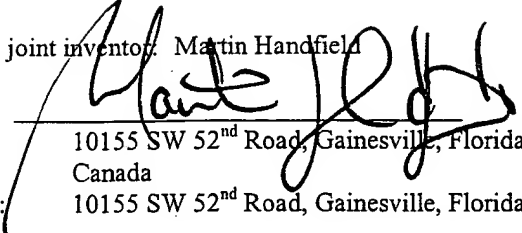
Citizenship:

United States of America

Post Office Address:

6392 Country Road 214 S., Keystone Heights, Florida 32656

Full name of second joint inventor: Martin Handfield

Inventor's signature: 

Date: 3/20/02

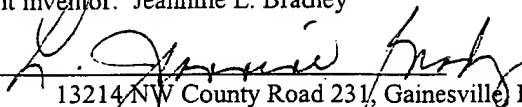
Residence: 10155 SW 52nd Road, Gainesville, Florida 32608

Citizenship: Canada

Post Office Address: 10155 SW 52nd Road, Gainesville, Florida 32608

Full name of third joint inventor: Jeannine L. Bradley

Inventor's signature:

 Date: 3/20/02

Residence:

13214 NW County Road 231, Gainesville, Florida 32609

Citizenship:

United States of America

Post Office Address:

13214 NW County Road 231, Gainesville, Florida 32609

Full name of fourth joint inventor: Jeffrey D. Hillman

Inventor's signature: _____

Date: _____

Residence:

6424 SW 26th Place, Gainesville, Florida 32608

Citizenship:

United States of America

Post Office Address:

6424 SW 26th Place, Gainesville, Florida 32608



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
(Case No.00-505-B)

In the Application of:)
)
Progulske-Fox) Art Group: Not assigned
)
Serial No.: 09/980,845)
) Examiner: Not assigned
Filed: August 4, 2000)
)
For: Microbial Polynucleotides Expressed)
During Infection of a Host)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL LETTER

Sir:

1. The Compact Disc contained herein "00-505 ST25" submitted under 37 C.F.R. § 1.52(e):

- ☒ Is formatted for IBM-PC Machines
- ☒ Is compatible with MS-Windows Operating System
- ☒ Contains the file "00-505 ST25" which is 26,624 bytes in size and was created on 03/16/2006.

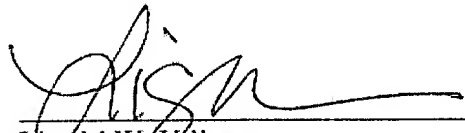
2. Statement under 37 C.F.R. § 1.52(e)(4): The undersigned certifies that the original CD-R submitted herein, titled "00-505 ST25" (COPY 2) and the copy CD-R, entitled "00-505 ST25" (COPY 1) are identical in content as required by C.F.R. § 1.52(e)(4).

Respectfully submitted,

McDonnell Boehnen Hulbert & Berghoff LLP

Dated: March 16, 2006

By:


Lisa M. W. Hillman
Reg. No. 43,673

McDonnell Boehnen Hulbert & Berghoff LLP
300 South Wacker Drive
32nd Floor
Chicago, Illinois 60606
Phone: 312-913-0001
Fax: 312-913-0002